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*U.T.M.D. Anderson Cancer Center*  
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**Investigator Meeting**  
**Atlanta, GA**  
**June 19 – 20, 2019**

# CCSS

## Childhood Cancer Survivor Study

*NCI-funded resource for outcome  
and intervention research*

**U24 CA55727**

**<http://ccss.stjude.org>**

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# 2019 CCSS Investigator Meeting At-A-Glance

Emory Conference Center Hotel

Atlanta, GA

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7:00 – 8:00 am	Breakfast Buffet	Executive Committee	Conference Dining Room
8:00 – 10:00 am	CCSS Executive Committee	Committee	Salons 3-5
10:00 am – 1:00 pm	CCSS Steering Committee and Principal Investigators	Steering and Executive Committees, Institutional PIs	Salons 3-5
1:00 – 2:00 pm	Lunch	Steering and Executive Committees, Institutional PIs	Conference Dining Room
2:00 – 6:30 pm	Plenary Session*	All Attendees	Emory Amphitheatre
6:30 – 7:30 pm	Founders Reception	All Attendees	Garden Courtyard
6:30 – 9:00 pm	Dinner		Conference Dining Room

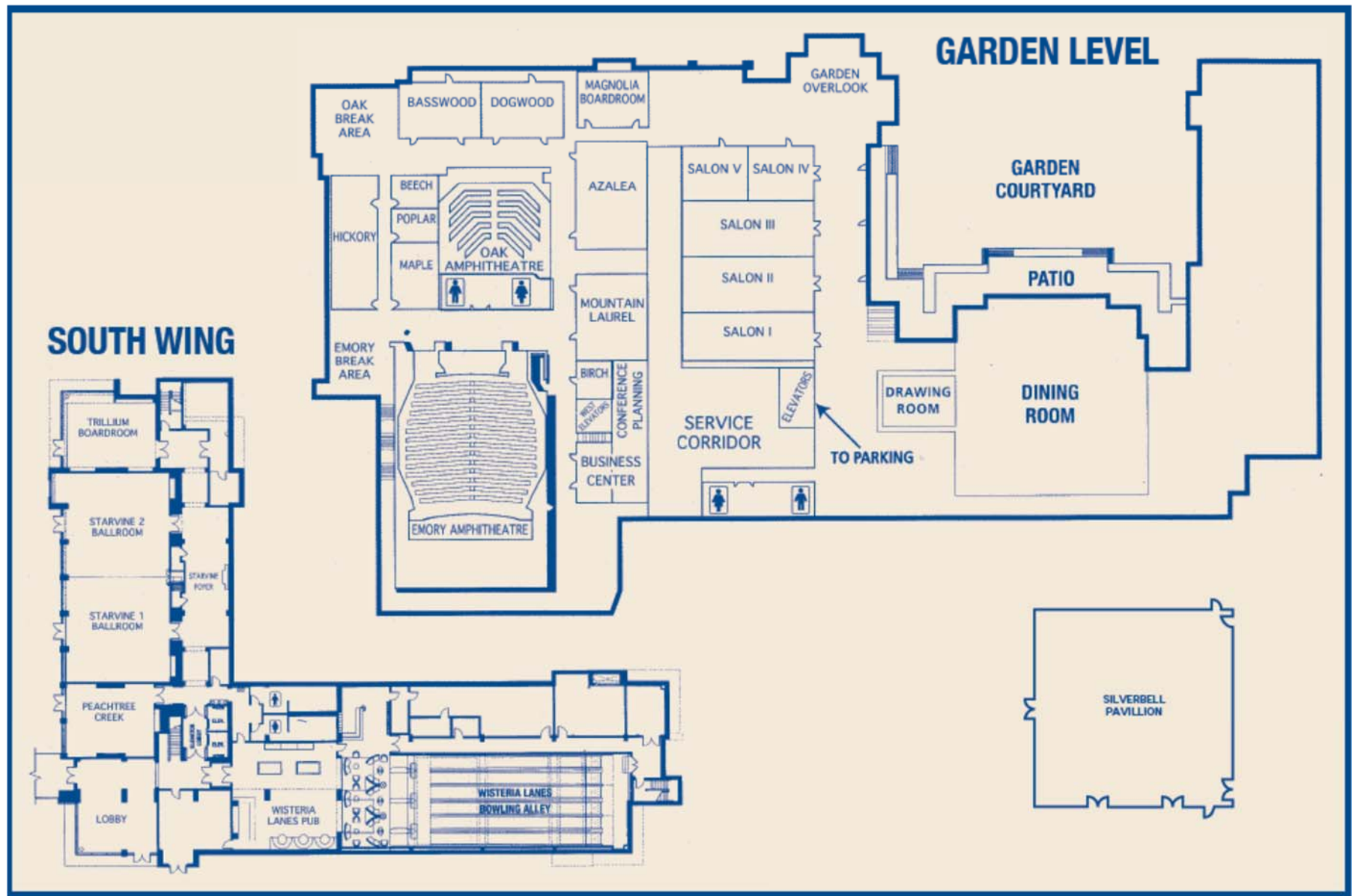
<b>Thursday, June 20</b>			
7:00 – 8:00 am	Breakfast Buffet	All Attendees	Conference Dining Room
8:00 – 10:30 am	Plenary Session*	All Attendees	Emory Amphitheatre
10:30 am – 12:00 pm	Break-Out Sessions*	All Attendees	To Be Announced
12:00 pm	Adjourn		

\*See the Plenary Session Agenda on the following page for details

## CCSS Investigator Meeting Plenary Session Agenda

<u>Day/Time</u>	<u>Topic</u>	<u>Presenter</u>	<u>Room</u>
<b>Wednesday, June 19</b> 2:00 – 3:40 pm	<u>Update Reports</u> Principal Investigator Coordinating Center Data and Statistics Center Radiation Physics Center Biopathology Center Biorepository/Molecular Genetic Bank Research and Publications Committee Education Committee	G. Armstrong T. Gibson W. Leisenring R. Howell M. Arnold S. Davies D. Green M. Hudson	Emory Amphitheatre
3:40 – 4:00 pm	Break		
4:00 – 5:00 pm	<u>Mobile Health in CCSS</u> EASE and EASE Breathe EMPOWER II SLEEP Study	N. Alberts K. Oeffinger T. Brinkman	Emory Amphitheatre
5:00 – 6:00 pm	<u>Research Presentations</u> Genetic Predisposition for SMN Surgical Outcomes in CCSS Cumulative Illness Burden in Aging Survivors	L. Morton B. Weil A. Esbenshade	Emory Amphitheatre
6:00 – 6:30 pm	<u>Ancillary Intervention Studies</u> EQUAL CHIIP	E. Tonorezos E. Chow	Emory Amphitheatre
<b>Thursday, June 20</b> 7:00 – 7:45 am	CCSS 101	E. Chow	Maple Room
8:00 – 10:30 am	<u>Working Group Reports</u> Chronic Disease Second Neoplasms Psychology Biostatistics/Epidemiology Genetics Cancer Control	K. Oeffinger/E. Chow J. Neglia K. Krull Y. Yasui S. Bhatia P. Nathan	Emory Amphitheatre
10:30 - 12:00 pm	<u>Working Group Breakout Sessions</u> Genetics (S. Bhatia) Chronic Disease (K. Oeffinger/E. Chow) Second Neoplasm (J. Neglia) Cancer Control (P. Nathan) Psychology (K. Krull) Biostatistics/Epidemiology (Y. Yasui)		To be announced

## Conference Center Floor Plan



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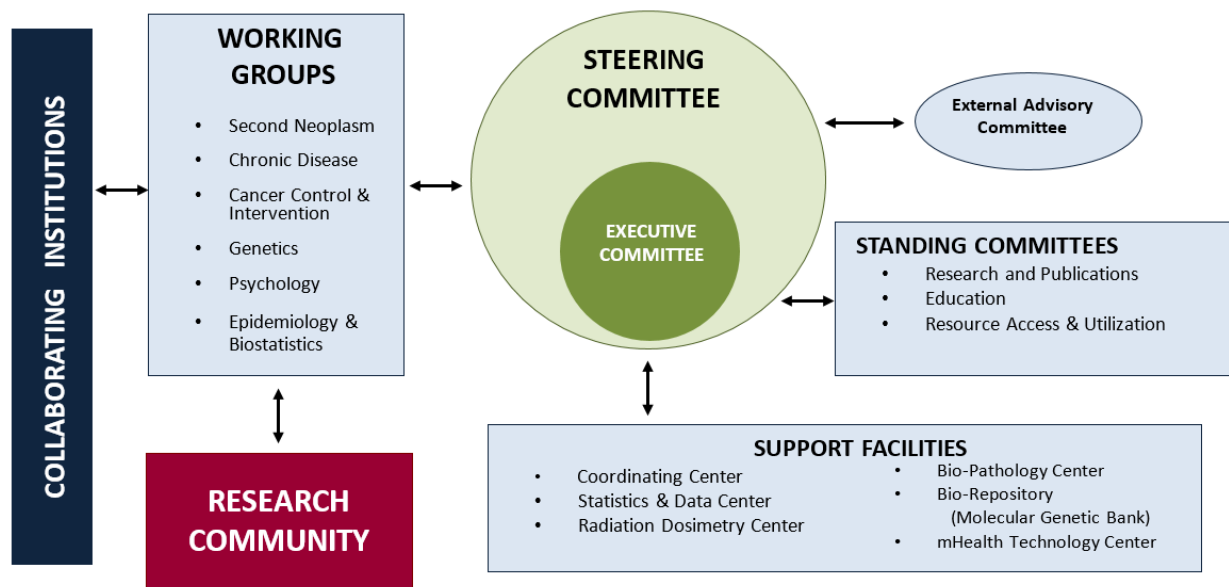
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Second Neoplasms	Joseph Neglia, MD, MPH*
Chronic Disease	Kevin Oeffinger, MD*
Cancer Control and Intervention	Paul Nathan, MD, MSC*
Genetics	Smita Bhatia, MD, MPH*
Psychology	Kevin Krull, PhD*
Epidemiology/Biostatistics	Yutaka Yasui, PhD*
<u>Standing Committee Chairs</u>	
Research and Publications Committee	Daniel Green, MD*
Education Committee	Melissa Hudson, MD*
Resource Access/Utilization Committee	Greg Armstrong, MD, MSCE*
<u>Support Facilities</u>	
Coordinating Center Director	Todd Gibson, PhD*
Statistics & Data Support Facility Director	Wendy Leisenring, ScD*
Radiation Physics Support Facility Director	Rebecca Howell, MD*
Molecular Genetic Bank Support Facility Director	Stella Davies, MD, PhD
Bio-Pathology Center Support Facility Director	Mike Arnold, MD, PhD
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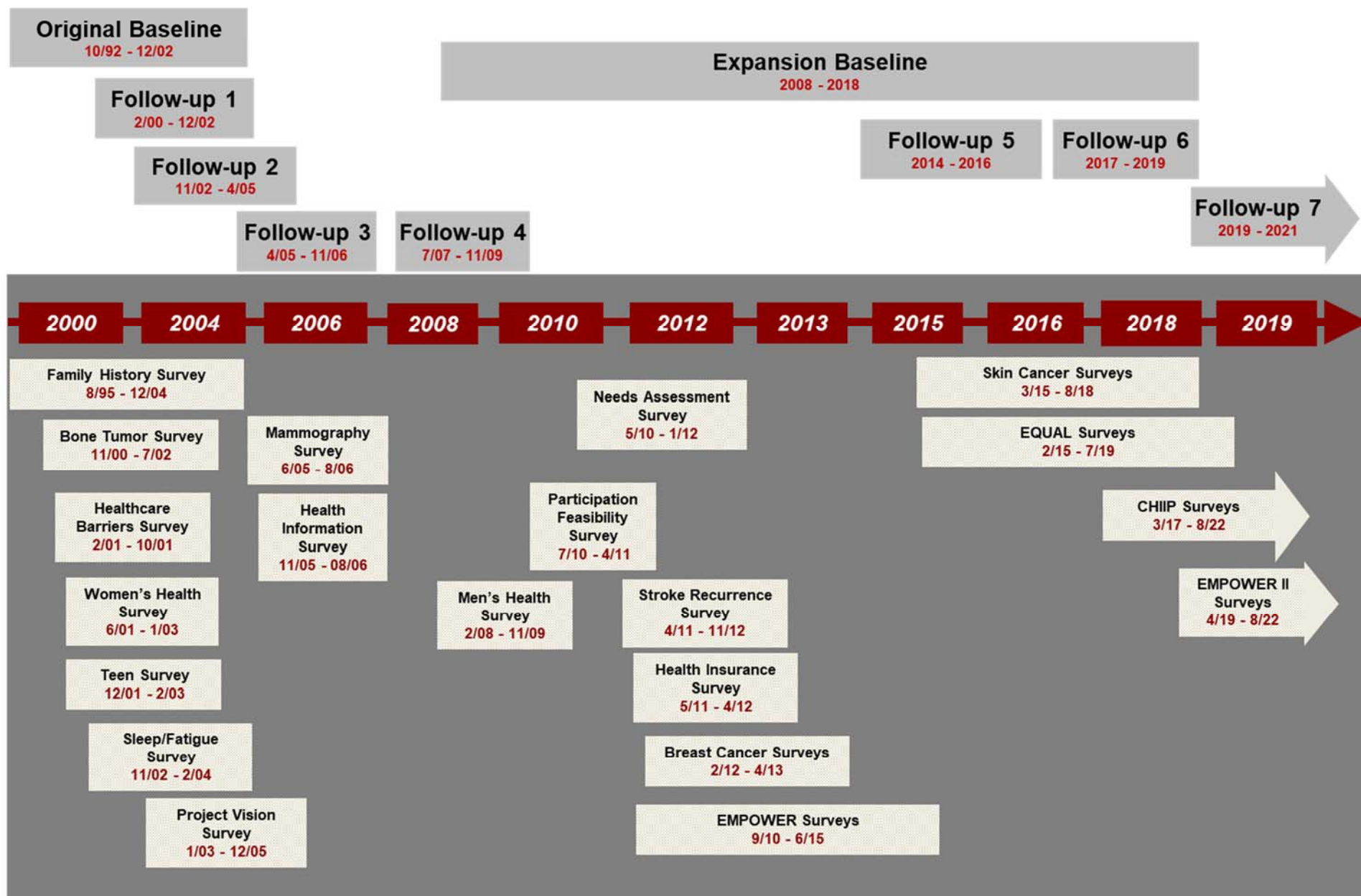
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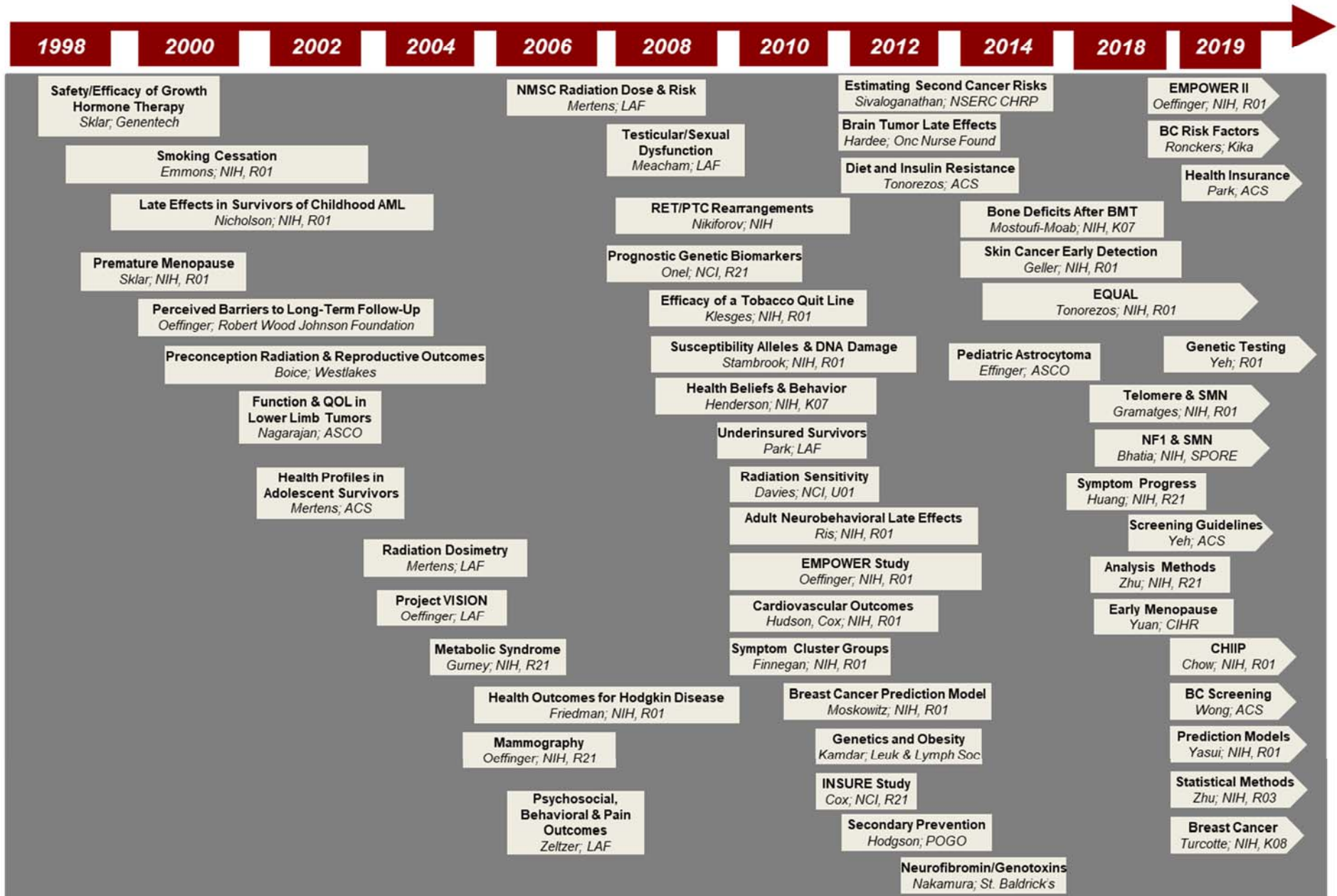
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# CCSS Cohort Surveys





# CCSS Externally-Funded Ancillary Studies



## Demographic and Cancer Treatment of Participants

Characteristics		Expansion cohort <sup>1</sup>		Original cohort <sup>2</sup>		Overall cohort <sup>3</sup>		Sibling cohort <sup>4</sup>	
		N	(%)	N	(%)	N	(%)	N	(%)
Total		11303	(100.0)	14361	(100.0)	25664	(100.0)	5059	(100.0)
Sex	Male	6011	(53.4)	7714	(53.7)	13725	(53.6)	2414	(47.7)
	Female	5292	(46.6)	6647	(46.3)	11939	(46.4)	2645	(52.3)
Race / ethnicity	White	9190	(81.1)	13035	(90.8)	22225	(85.8)	4558	(90.2)
	Black	991	(8.3)	713	(5.0)	1704	(6.7)	153	(3.0)
	American Indian / Alaska Native	66	(0.6)	89	(0.6)	155	(0.6)	23	(0.5)
	Asian or Pacific Islander	247	(2.4)	168	(1.2)	415	(1.8)	53	(1.0)
	Other	804	(7.5)	226	(1.6)	1030	(4.7)	92	(1.8)
	Unknown	5	(0.0)	124	(0.9)	129	(0.4)	172	(3.4)
Hispanic	Yes	1293	(12.1)	752	(5.2)	2045	(8.8)	216	(4.3)
	No	9993	(87.8)	12961	(90.3)	22954	(89.0)	4635	(91.8)
	Unknown	17	(0.1)	642	(4.5)	659	(2.2)	200	(4.0)
Age at diagnosis	0-4 yrs	4437	(45.1)	5751	(40.0)	10188	(42.6)	.	.
	5-9 yrs	2581	(25.0)	3204	(22.3)	5785	(23.7)	.	.
	10-14 yrs	2530	(18.1)	2915	(20.3)	5445	(19.2)	.	.
	15-20 yrs	1753	(11.8)	2491	(17.3)	4244	(14.5)	.	.
Diagnosis	ALL	2286	(41.1)	4329	(30.1)	6615	(35.8)	.	.
	AML	571	(3.7)	356	(2.5)	927	(3.1)	.	.
	Other leukemia	185	(1.2)	145	(1.0)	330	(1.1)	.	.
	Astrocytoma	1506	(9.8)	1182	(8.2)	2688	(9.1)	.	.
	Medulloblastoma/PNET	660	(4.3)	380	(2.6)	1040	(3.5)	.	.
	Other CNS malignancy	450	(2.9)	311	(2.2)	761	(2.6)	.	.
	Hodgkin lymphoma	1180	(7.7)	1927	(13.4)	3107	(10.5)	.	.
	Non-Hodgkin lymphoma	1034	(6.7)	1082	(7.5)	2116	(7.1)	.	.
	Kidney cancer	1018	(6.6)	1258	(8.8)	2276	(7.7)	.	.
	Neuroblastoma	993	(6.5)	955	(6.6)	1948	(6.6)	.	.
	Soft tissue sarcoma	510	(3.3)	1246	(8.7)	1756	(5.9)	.	.
	Ewings sarcoma	334	(2.2)	405	(2.8)	739	(2.5)	.	.
	Osteosarcoma	524	(3.4)	733	(5.1)	1257	(4.2)	.	.
	Other bone malignancy	51	(0.3)	52	(0.4)	103	(0.3)	.	.
Vital status	Alive	10391	(93.0)	11245	(78.3)	21636	(85.9)	4993	(98.7)
	Dead	912	(7.0)	3116	(21.7)	4028	(14.1)	66	(1.3)
Age at December 31, 2016	<20 yrs	668	(5.6)	681	(4.7)	1349	(5.2)	81	(1.6)
	20-29 yrs	4260	(42.1)	656	(4.6)	4916	(23.9)	421	(8.3)
	30-39 yrs	4935	(42.4)	3836	(26.7)	8771	(34.8)	1478	(29.2)

Characteristics		Expansion cohort <sup>1</sup>		Original cohort <sup>2</sup>		Overall cohort <sup>3</sup>		Sibling cohort <sup>4</sup>	
		N	(%)	N	(%)	N	(%)	N	(%)
	40-49 yrs	1420	(9.8)	5758	(40.1)	7178	(24.4)	1671	(33.0)
	50-59 yrs	15	(0.1)	3392	(23.6)	3407	(11.5)	1408	(27.8)
	Unknown age	5	(0.0)	38	(0.3)	43	(0.2)	.	
Year of diagnosis	1970-79	.		6612	(46.0)	6612	(22.3)	.	
	1980-89	2302	(20.8)	7749	(54.0)	10051	(36.8)	.	
	1990-99	8999	(79.2)	.		8999	(40.9)	.	
Medical records available	Yes	10968	(97.3)	12783	(89.0)	23751	(93.3)	.	
	No	335	(2.7)	1578	(11.0)	1913	(6.7)	.	
Treatment	Surgery only (S)	1238	(8.1)	915	(6.4)	2153	(7.3)	.	
	Chemo only (C)	1790	(27.1)	905	(6.3)	2695	(17.1)	.	
	Radiation only (R)	35	(0.2)	42	(0.3)	77	(0.3)	.	
	C + R	741	(9.3)	1677	(11.7)	2418	(10.4)	.	
	C + S	3212	(24.8)	2240	(15.6)	5452	(20.4)	.	
	R + S	485	(3.2)	1504	(10.5)	1989	(6.7)	.	
	C + R + S	3300	(23.4)	5046	(35.1)	8346	(29.1)	.	
	No treatment	47	(0.3)	29	(0.2)	76	(0.3)	.	
	Unknown treatment	455	(3.6)	2003	(13.9)	2458	(8.6)	.	

<sup>1</sup> 16,906 survivors were eligible for the expansion cohort

<sup>2</sup> 20,687 eligible original cohort

<sup>3</sup> 37,593 eligible combined

<sup>4</sup> 4,030 siblings from the original cohort, 1,029 from the expansion



## Expansion Cohort HIPAA and Baseline Survey Status

Name	Eligible	HIPAA Returned	HIPAA Returned (% of Elig)	Baseline Completed	Baseline Completed (% of HIPAA)	Baseline Completed (% of Elig)
St. Jude Children's Research Hosp	2,089	1,916	91.7%	1,795	93.7%	85.9%
Children's Hospital Colorado	594	517	87.0%	458	88.6%	77.1%
University of Minnesota	277	229	82.7%	197	86.0%	71.1%
St. Louis Children's Hospital	418	339	81.1%	289	85.3%	69.1%
Univ of Michigan - Mott Children's	662	532	80.4%	457	85.9%	69.0%
Nationwide Childrens Hosp	501	396	79.0%	345	87.1%	68.9%
UAB/Childrens Hospital of AL	364	294	80.8%	248	84.4%	68.1%
Childrens Hospital at Stanford	370	301	81.4%	251	83.4%	67.8%
Minneapolis Children's Med Center	581	471	81.1%	393	83.4%	67.6%
Childrens Hospital of Philadelphia	1,006	798	79.3%	672	84.2%	66.8%
Children's Hospital of Pittsburgh	754	597	79.2%	502	84.1%	66.6%
Emory University	715	578	80.8%	470	81.3%	65.7%
Riley Hospital for Children	833	669	80.3%	544	81.3%	65.3%
City of Hope	128	97	75.8%	83	85.6%	64.8%
U.T.M.D. Anderson Cancer Center	605	478	79.0%	382	79.9%	63.1%
Texas Children's Hospital	593	445	75.0%	372	83.6%	62.7%
UCLA Mattel Children's Hospital	67	47	70.1%	42	89.4%	62.7%
UT Southwestern MedCenter	638	516	80.9%	399	77.3%	62.5%
Seattle Children's Hospital	818	621	75.9%	499	80.4%	61.0%
Memorial Sloan-Kettering	648	459	70.8%	391	85.2%	60.3%
Roswell Park Cancer Institute	239	173	72.4%	141	81.5%	59.0%
Children's Hospital of Los Angeles	741	560	75.6%	436	77.9%	58.8%
Children's National Medical Center	295	198	67.1%	169	85.4%	57.3%
Univ of California at San Francisco	392	273	69.6%	223	81.7%	56.9%
Dana-Farber Cancer Institute	900	631	70.1%	465	73.7%	51.7%
<i>Sub-total</i>	<i>15,228</i>	<i>12,135</i>	<i>79.7%</i>	<i>10,223</i>	<i>84.2%</i>	<i>67.1%</i>
University of Chicago	349	249	71.3%	212	85.1%	60.7%
Lurie Children's Hospital	780	518	66.4%	435	83.9%	55.7%
Cook Children's Hospital	526	351	66.7%	287	81.7%	54.6%
Children's Hosp of Orange County	466	281	60.3%	229	81.5%	49.1%
<i>New Site Sub-total</i>	<i>2,121</i>	<i>1,399</i>	<i>66.0%</i>	<i>1,163</i>	<i>83.1%</i>	<i>54.8%</i>

Report Date: 5/2019

## Follow-Up Survey Participation (Survivors)

Questionnaire	Number of Pages	Presumed Eligible	Participation Rate	Non-Response	Refused Questionnaire	Dropout of Study	Lost to Follow-Up
Follow-Up 1	16	n = 12,884	81%	6%	2%	4%	7%
Follow-Up 2	24	n = 11,859	78%	8%	3%	5%	6%
Follow-Up 3	4	n = 11,393	78%	5%	1%	3%	13%
Follow-Up 4	28	n = 10,143	82%	8.9%	2.4%	1.6%	5.1%
Follow-Up 5	36	n = 18,041	66%	20%	1.7%	1.2%	11.1%
Follow-Up 6 <sup>1</sup>	8 – 16 <sup>2</sup>	n = 17,301	76%	14.3%	0.2%	0.7%	8.8%

<sup>1</sup> Accrual ongoing

<sup>2</sup> The three versions of the FU6 survey were 8, 12, and 16 pages; see the following pages for return rates

## Follow-Up 6 Survey Status (Accrual Ongoing) – Survivors

	Short (8 pages)		Medium (12 pages)		Long (16 pages)	
<b>Mailed</b>	<b>10,327</b>		<b>5,489</b>		<b>1,640</b>	
<b>Returned</b>	<b>7,839</b>	<b>75.9%</b>	<b>4,084</b>	<b>74.4%</b>	<b>1,162</b>	<b>70.9%</b>
Paper	3,360	42.8%	1,914	46.9%	524	45.1%
Online	2,820	36.0%	1,596	39.1%	487	41.9%
Interviewer	1,659	21.2%	574	14.1%	151	13.0%
<b>Pending</b>	<b>1,407</b>	<b>13.6%</b>	<b>810</b>	<b>14.8%</b>	<b>329</b>	<b>20.1%</b>
<b>Bad address</b>	<b>157</b>	<b>1.5%</b>	<b>91</b>	<b>1.7%</b>	<b>45</b>	<b>2.7%</b>
<b>Bad phone number</b>	<b>608</b>	<b>5.9%</b>	<b>317</b>	<b>5.8%</b>	<b>66</b>	<b>4.0%</b>
<b>Bad address and phone</b>	<b>153</b>	<b>1.5%</b>	<b>70</b>	<b>1.3%</b>	<b>17</b>	<b>1.0%</b>
<b>Refused FU6</b>	<b>13</b>	<b>0.1%</b>	<b>11</b>	<b>0.2%</b>	<b>3</b>	<b>0.2%</b>
<b>Refused FU6 and CCSS</b>	<b>67</b>	<b>0.6%</b>	<b>47</b>	<b>0.9%</b>	<b>5</b>	<b>0.3%</b>
<b>Deceased</b>	<b>77</b>	<b>0.7%</b>	<b>54</b>	<b>1.0%</b>	<b>11</b>	<b>0.7%</b>
<b>In Jail/Unavailable</b>	<b>6</b>	<b>0.1%</b>	<b>5</b>	<b>0.1%</b>	<b>2</b>	<b>0.1%</b>

Report Date: 5/2019

## Follow-Up 6 Survey Status (Accrual Ongoing) – Siblings

	Short (8 pages)		Medium (12 pages)		Long (16 pages)		Minor (8 pages)	
<b>Mailed</b>	<b>1,590</b>		<b>1,592</b>		<b>450</b>		<b>16</b>	
<b>Returned</b>	<b>1,043</b>	<b>65.6%</b>	<b>1,010</b>	<b>63.4%</b>	<b>299</b>	<b>66.4%</b>	<b>13</b>	<b>81.3%</b>
Paper	524	50.2%	500	49.5%	129	43.1%	7	53.8%
Online	410	39.3%	445	44.1%	137	45.8%	3	23.1%
Interviewer	109	10.5%	65	6.4%	33	11.0%	3	23.1%
<b>Pending</b>	<b>343</b>	<b>21.6%</b>	<b>354</b>	<b>22.2%</b>	<b>92</b>	<b>20.6%</b>	<b>3</b>	<b>18.8%</b>
<b>Bad address</b>	<b>33</b>	<b>2.1%</b>	<b>40</b>	<b>2.5%</b>	<b>12</b>	<b>2.7%</b>	<b>0</b>	<b>0.0%</b>
<b>Bad phone number</b>	<b>131</b>	<b>8.2%</b>	<b>120</b>	<b>7.5%</b>	<b>28</b>	<b>6.3%</b>	<b>0</b>	<b>0.0%</b>
<b>Bad address and phone</b>	<b>20</b>	<b>1.3%</b>	<b>36</b>	<b>2.3%</b>	<b>11</b>	<b>2.5%</b>	<b>0</b>	<b>0.0%</b>
<b>Refused FU6</b>	<b>2</b>	<b>0.1%</b>	<b>4</b>	<b>0.3%</b>	<b>1</b>	<b>0.2%</b>	<b>0</b>	<b>0.0%</b>
<b>Refused FU6 and CCSS</b>	<b>16</b>	<b>1.0%</b>	<b>20</b>	<b>1.3%</b>	<b>7</b>	<b>1.6%</b>	<b>0</b>	<b>0.0%</b>
<b>In Jail/Unavailable</b>	<b>0</b>	<b>0.0%</b>	<b>6</b>	<b>0.4%</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>	<b>0.0%</b>
<b>Deceased</b>	<b>2</b>	<b>0.1%</b>	<b>2</b>	<b>0.1%</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>	<b>0.0%</b>

Report Date: 5/2019

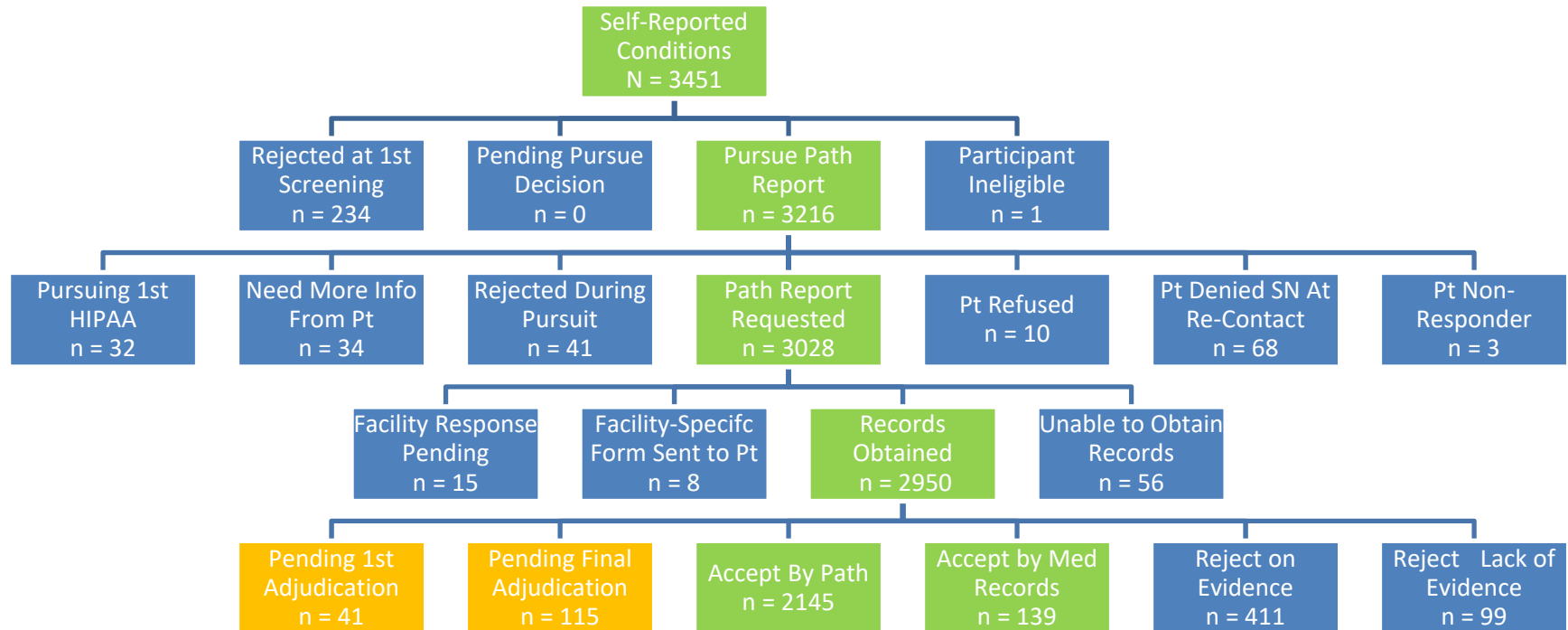
## Oragene DNA Kit Status Summary

Kits Sent	Original Survivors (n = 9,565)		Original Siblings (n = 3,129)	
	<i>n</i>	<i>% of Sent</i>	<i>n</i>	<i>% of Sent</i>
Returned	5,257	55.0%	1,170	37.4%
Refused	937	9.7%	240	7.7%
Pending	2,187	22.9%	1,154	36.9%
In Tracing	850	8.9%	533	17.0%
Deceased	334	3.5%	32	1.0%

Kits Sent	Expansion Survivors (n = 9,624)		Expansion Siblings (n = 875)	
	<i>n</i>	<i>% of Sent</i>	<i>n</i>	<i>% of Sent</i>
Returned	5,091	53.0%	473	54.1%
Refused	446	4.6%	50	5.7%
Pending	3,079	32.0%	270	30.9%
In Tracing	928	9.6%	82	9.3%
Deceased	80	0.8%	0	0.0%

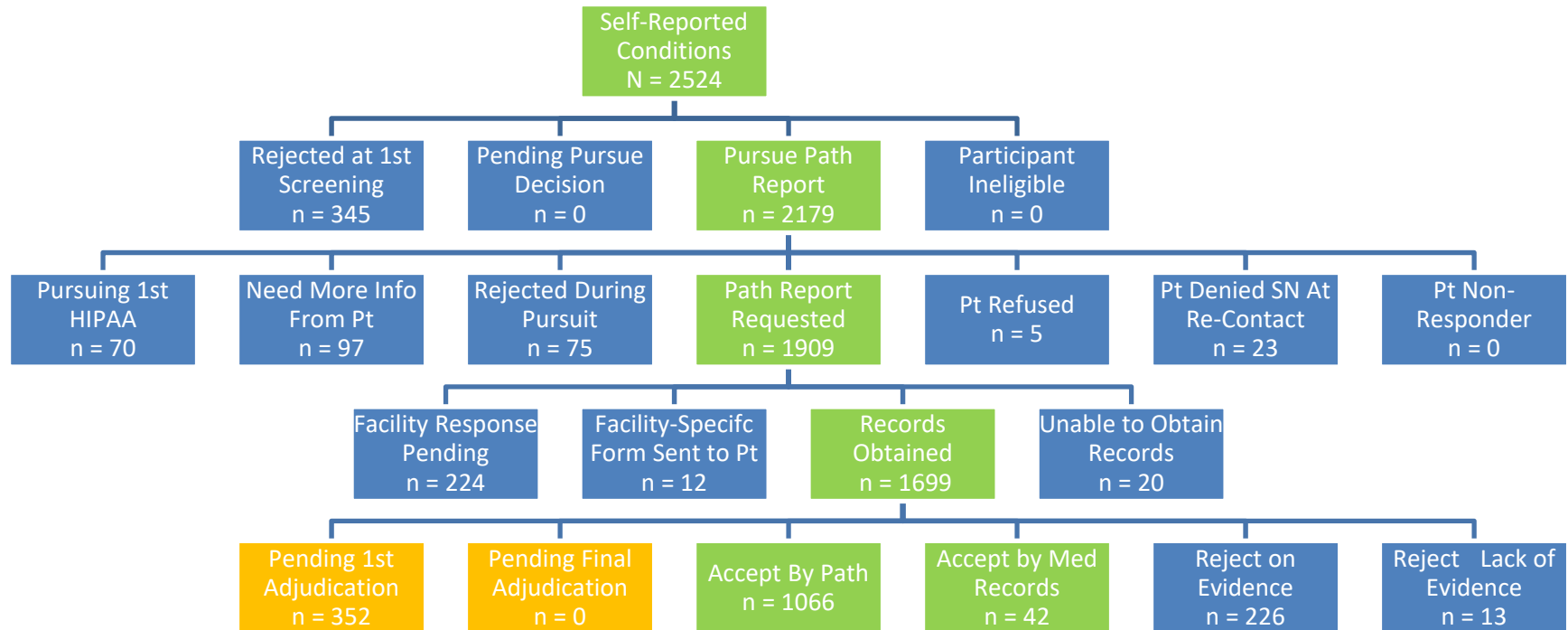
Report Date: 5/2019

## Follow-Up 5 Subsequent Neoplasm Confirmation Status Report



Report Date: 5/2019

## Follow-Up 6 Subsequent Neoplasm Confirmation Status Report



Report Date: 5/2019

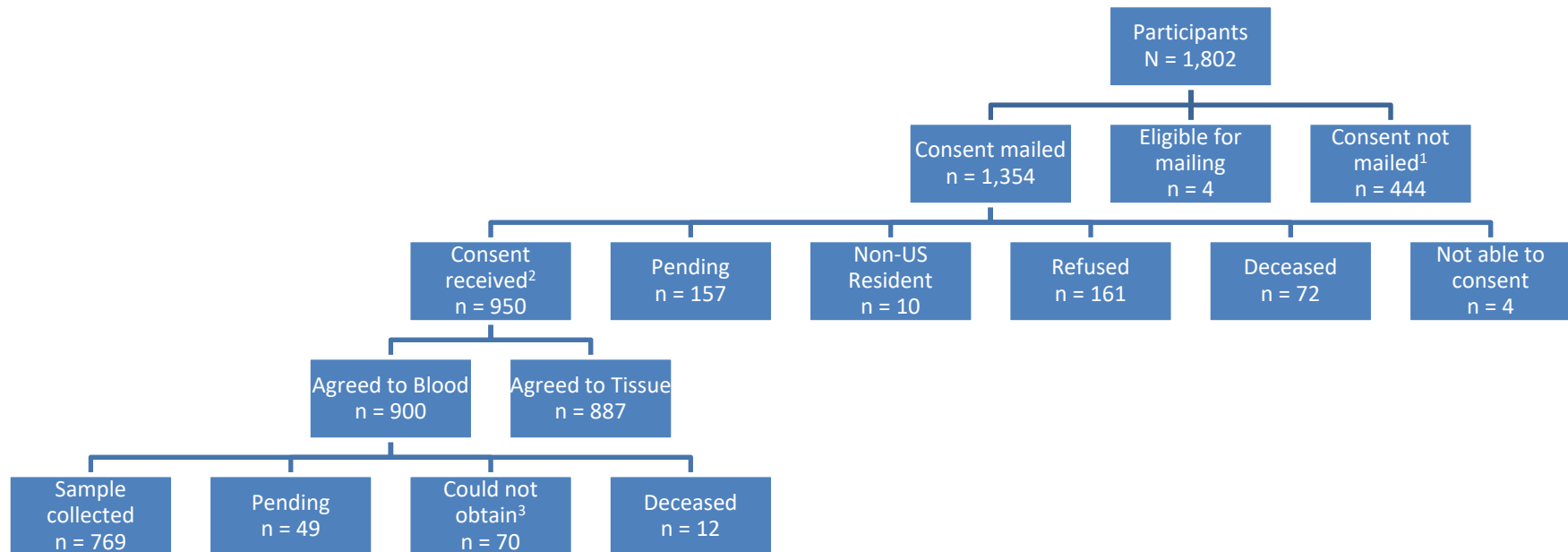
## Subsequent Neoplasms by Primary Cancer Diagnosis – Overall Cohort

Subsequent Neoplasm*	Primary Cancer Diagnosis								
	Leukemia	CNS	HD	NHL	Kidney	Neuro-blastoma	Soft tissue sarcoma	Bone cancer	Total
Breast	51	10	314	20	23	5	32	71	526
Meningioma	238	162	7	21	1	10	13	4	456
Other CNS	53	51	11	7	1	2	6	2	133
Thyroid	77	45	91	19	10	19	12	24	297
Soft tissue sarcoma	10	17	29	5	12	6	27	11	117
Leukemia	19	5	19	9	0	5	1	7	65
Bone	8	5	9	3	6	3	14	10	58
Melanoma	16	14	12	5	4	5	10	11	77
Lymphoma	11	4	32	11	1	4	5	2	70
Renal carcinoma	8	4	9	6	4	12	5	7	55
Other carcinoma	50	20	87	25	20	5	24	30	261
NMSC	1,280	502	1,513	251	83	106	120	111	3,966
All others	11	13	15	9	8	6	5	7	74
<b>Total</b>	<b>1,832</b>	<b>852</b>	<b>2,148</b>	<b>391</b>	<b>173</b>	<b>188</b>	<b>274</b>	<b>297</b>	<b>6,155</b>

\*Restricted to subsequent neoplasm  $\geq 5$  years from primary cancer diagnosis; includes in-situ breast cancer and non-invasive melanoma



## Blood/Tissue Consent and Blood Collection Status for Participants with a Confirmed SMN



<sup>1</sup> Reasons for consent not mailed:

- Deceased = 372
- Canadian resident = 7
- LAR/not competent to consent = 38
- Lost to follow-up = 2
- Refused CCSS = 25

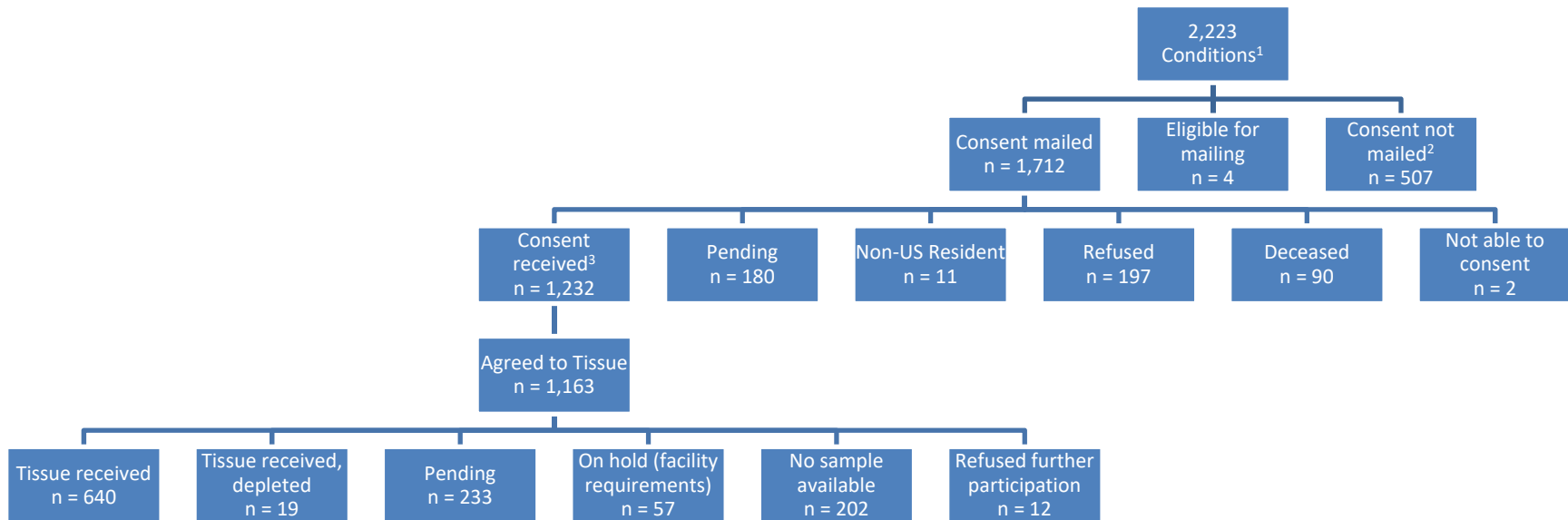
<sup>2</sup> Return rate is 70.1% of consents mailed; 69.9% of participants eligible for mailing; 52.7% of participants with a condition

<sup>3</sup> Reasons sample could not be obtained:

- Unable to schedule/contact = 8
- Unable to draw blood = 27
- Non-US resident = 13
- Refused blood collection = 22

Report Date: 5/2019

## Tissue Collection Status for Confirmed SMN Conditions



<sup>1</sup> 1,802 participants

<sup>2</sup> Reasons for consent not mailed:

- Deceased = 423
- Non-US resident = 9
- LAR/not competent to consent = 46
- Lost to follow-up = 2
- Refused CCSS = 27

<sup>3</sup> Return rate is 71.9% of consents mailed; 55.4% of eligible conditions

Report Date: 5/2019

## Distribution of Biologic Material Available for Subsequent Neoplasms

SMN	Total case reported	Total with path reports	# with host tissue			Host tissue (any kind) and MRAF data	Total with MRAF data	Total with SMN tissue	Number of Cases with Tissue Type			
			Buccal cells	Oragene	Blood				H&E Slides	Unstained Slides	Scrolls	Blocks
Breast	526	309	258	293	275	380	505	214	210	127	62	83
Meningioma*	456	179	223	277	221	335	425	105	104	63	22	55
Other CNS	133	62	26	27	21	38	128	28	27	15	2	7
Thyroid	297	140	117	186	168	221	289	115	114	89	50	41
Sarcoma	117	73	40	40	33	56	109	30	30	26	12	8
Leukemia	65	27	10	16	9	18	59	7	7	6	2	1
Bone	58	38	11	10	12	19	50	1	1	1	0	1
Melanoma	77	37	31	43	36	53	75	17	17	12	3	4
Lymphoma	70	34	20	32	25	39	65	14	13	8	5	5
Renal Cell	55	25	26	30	20	33	49	12	12	10	2	4
Other Carcinoma	261	105	108	129	97	154	249	102	101	53	19	55
NMSC*	3966	1643	2047	2523	1192	2961	3706	5	5	3	1	1
All Other	74	21	26	28	21	36	68	11	11	9	2	2
<b>TOTALS</b>	<b>6,155</b>	<b>2,693</b>	<b>2,943</b>	<b>3,634</b>	<b>2,130</b>	<b>4,343</b>	<b>5,777</b>	<b>661</b>	<b>652</b>	<b>422</b>	<b>182</b>	<b>267</b>

\*includes all invasive and non-invasive cases

Report Date: 5/2019

CCSS Request for Proposals for Genome-Wide Investigation of Late-Effects						
Date Reviewed	Primary Outcome	PI/Institution	Approval Status	Concept Status	Annual Report Status	Publication Status
06.01.2017	<b>Myocardial Infarction</b>	Morrison/Univ. Texas Health Science Center	Approved with Stipulations	Approved	Received	Analysis Underway
	<b>Stroke</b>	Morrison/Univ. Texas Health Science Center Bowers/Univ. Texas Southwestern	Approved with Stipulations	Approved	Received	Analysis Underway
	<b>Diabetes Mellitus</b>	Lupo/Baylor College of Medicine	Approved with Stipulations	Approved	Received	Analysis Underway; Abstract Accepted to NASLCCC
	<b>Thyroid Nodules, Intestinal Polyps</b>	Shultz/Children's Hospitals and Clinics of Minnesota	Approved with Stipulations	On Hold	Pending	-
	<b>Cardiomyopathy Simulation Model</b>	Yeh/Boston Children's Hospital, Harvard Medical School	Approved	Approved	Received	RO1 Funded; Analysis Underway
	<b>Somatic Loss of Y Chromosome</b>	Pierce/University of Chicago	Not Approved, No Further Consideration Given	-	-	-
10.01.2017	<b>Tinnitus</b>	Dolan/University of Chicago	Approved	Approved	Received	Analysis Underway
	<b>Intestinal Obstruction</b>	Madenci/Boston Children's Hospital	Approved	Approved	Received	Analysis Underway
	<b>Anthracycline Cardiomyopathy</b>	Bhatia/University of Alabama Birmingham	Approved	Approved	Received	Analysis Underway
	<b>Psychological and Well-being Traits</b>	Olgunju/University of Adelaide	Not Approved, No Further Consideration Given	-	-	-
02.01.2018	<b>iPSC-Cardiomyocyte RNAseq Identified Genes and Cardiomyopathy</b>	Reyes/MD Anderson	Approved with Stipulations	Approved	Received	Analysis Underway

Date Reviewed	Primary Outcome	PI/Institution	Approval Status	Concept Status	Annual Report Status	Publication Status
02.01.2018	<b>Genetic Polymorphisms in Cyclophosphamide Exposed Survivors</b>	Rotz/Cleveland Clinic	Not Approved, Revised Application Considered	Approved	Received	Analysis Underway
	<b>Treatment Induced Hearing Loss</b>	Orgel/Children's Hospital of Los Angeles	Not Approved, Revised Application Considered	-	-	-
06.01.2018	<b>Alzheimer's Disease in Childhood Cancer Survivors</b>	Zhu/University of Texas Health Science Center	Not Approved, No Further Consideration Given	-	-	-
	<b>Genetic Predisposition to Radiation-associated Pulmonary Fibrosis</b>	Londono-Vallejo/Institute Curie	Not Approved, Revised Application Considered	-	-	-
10.01.2018	<b>Genetic Susceptibility to Neurocognitive Impairment Secondary to Childhood Cancer Treatment</b>	Scheurer/Baylor College of Medicine	Approved	Approved	Pending	Analysis Underway
	<b>Genome-wide Investigation of Dyslipidemia</b>	Pluimakers/ Princess Maxima Centre	Not Approved, Revised Application Considered	-	-	-
<b>ADDITIONAL GWAS STUDIES INITIATED AFTER CLOSE OF GWAS RFP PROCESS</b>						
	<b>Genetic Risk Prediction Profiles for Fracture Among Survivors</b>	Im/University of Alberta	AOI Approved	Approved	Received	Analysis Underway
	<b>Developing a Clinical and Genetic Risk Prediction Model for Diabetes Mellitus among Survivors of Childhood Cancer</b>	Lupo/Baylor College of Medicine	AOI Approved	-	-	-
	<b>Genetic Determinants of Posttraumatic Stress Disorder in Pediatric Cancer Survivors</b>	Recklitis/Dana Farber Cancer Institute	AOI Approved	-	-	-
	<b>GWAS of Cisplatin Induced and Non-Cisplatin Induced Hearing Loss.</b>	Dolan/University of Chicago	AOI Approved	-	-	-
	<b>GWAS of Hypertension in Adult Survivors of Childhood Cancer</b>	Pierzynski/ SJCRH	AOI Approved	-	-	-

As of 5/29/2019

## 2015 to 2019 RT Data Analyses Summary

Concept #	Study Title	Study PI	Cohort	Dosimetry Data Required	Dosimetry Status
<b>Case control studies</b>					
11-16	Second primary breast cancers among childhood cancer survivors: joint effects of treatment and host factors	Berrington Gonzalez/ Vega (Original PI: Inskip)	Original (females only)	Average dose to specific breast locations, average thyroid dose	Completed: breast 9/15; thyroid 3/16
<b>Cohort studies</b>					
11-20	Solid organ transplant in 5- year survivors of pediatric cancer	Termuhlen	Overall	Average doses for heart, kidney, lung; maximum TD to abdomen body region, prescribed TBI Dose	Completed 3/16
13-16	Comparison of radiation dose reconstruction methods for subsequent neoplasm studies.	Lindsay Morton	Original	Maximum TD for body regions, treatment field type(s) for each patient (requested 7/16)	Completed body region 12/13; other organs 12/14; field data 9/16
14-11	Analysis of Late Mortality by Treatment Era	Gregory Armstrong	Expanded	Maximum TD for body regions and CNS field/dose summary	Completed 3/15
15-02	Esophageal disease after childhood cancer therapy: Experience from three childhood cancer survivor cohorts.	Peter Asdahl	Original	Average dose for esophagus or maximum TD for chest, average doses for thyroid and heart	Completed: chest 3/15; thyroid 7/13; heart 1/12
15-05	Cyclophosphamide equivalent dosing and male health late effects – Infertility, erectile dysfunction, sexual function and testosterone replacement therapy in survivors diagnosed from 1970-1986: A report from the Childhood Cancer Survivor Study	Lillian Meacham	Original	Average dose for testes and pituitary	Completed 9/14

Concept #	Study Title	Study PI	Cohort	Dosimetry Data Required	Dosimetry Status
15-06	Exome sequencing to discover genetic variants that predispose childhood cancer survivors to the development of subsequent neoplasms.	Lindsay Morton	Original	Maximum TD for body regions, average doses for other organs and ABM for GWAS group	Completed: body region 12/13; other organs 12/14; ABM 2/14
15-07	Changes in long-term outcomes in Hodgkin lymphoma survivors with contemporary risk-adapted therapy	Kevin Oeffinger	Overall	Treatment summaries with treatment field types and maximum TD for body regions	Completed 10/15
15-08	Impact of radiation dose and volume to the pancreas on subsequent risk of diabetes mellitus in long-term survivors of childhood cancer treated with abdominal radiation: A report from the Childhood Cancer Survivor Study	Danielle Novetsky Friedman	Overall	Average dose for pancreas (entire, head, body, tail), V <sub>20</sub> and V <sub>30</sub> for whole pancreas	Completed 12/16
15-14:	Burden of morbidity after basal cell carcinoma in childhood cancer survivors	Smita Bhatia	Original	Maximum TD for body regions	Completed 3/15
15-16	Human papillomavirus (HPV)-associated malignancies as second cancers in childhood cancer survivors: a report from the Childhood Cancer Survivor Study	Tara Henderson	Overall	Y/N for any RT	Y/N data provided by Statistics and Data Center
15-17	Risk for late effects of treatment in children newly diagnosed with mature B-cell non-Hodgkin lymphoma: a report from the Childhood Cancer Survivor Study cohort	Matthew Ehrhardt	Overall	Y/N for any RT (possibly with cutoff using recurrence date); maximum TD for body regions	Completed 9/16 for maximum TD for body regions – 5-year cut-off; unable to provide doses from primary XRT only unless recurrence dates provided.
16-01	Cause-Specific mortality among childhood cancer survivors with a subsequent thyroid cancer	Dana Barnea	Overall	Average dose for right and left thyroid	Completed: expansion cohort 7/16; original cohort 7/13

Concept #	Study Title	Study PI	Cohort	Dosimetry Data Required	Dosimetry Status
16-02	Medulloblastoma and Primitive Neuroectodermal Tumor (PNET) outcomes across three decades of diagnosis	Ralph Salloum	Overall	Dose for CSI specified as: Y/N for brain, spine, TBI; Maximum TD for brain, brain four segments, spine, and TBI; Minimum CSI dose (min dose received by whole brain or spine)	Completed 9/16
16-03	Hospitalization and mortality due to Infection among survivors of childhood cancer with asplenia	Brent Weil	Overall	Average dose for upper left quadrant of abdomen (spleen surrogate)	Completed 12/16
16-04	Cognitive and behavioral outcomes in survivors of neuroblastoma	Daniel Zheng	Overall	Y/N for RT: any, cranial, TBI, and chest/neck	Completed 9/16
16-05	Long-term Incidence of venous thromboembolism among survivors of childhood cancer	Arin Madenci	Overall	Maximum TD for body regions	Completed 9/16
16-06	Psychosocial outcomes in adolescent survivors of Wilms tumor	Rebecca Foster	Overall	Y/N for RT: any, abdomen, and chest	Completed 9/16
16-07	The Impact of developmental status on radiation-associated late cardiac toxicities in long-term survivors of childhood cancer	James Bates	Overall	Average heart dose; Also of interest: V <sub>5</sub> , V <sub>10</sub> , V <sub>15</sub> , V <sub>20</sub> . Note that metrics > V <sub>20</sub> cannot be calculated due to inconsistent or missing details of heart blocking in RT records.	Completed: Average doses completed for original cohort 1/12; expanded cohort 1/16; V <sub>5</sub> , V <sub>10</sub> , V <sub>15</sub> , V <sub>20</sub> completed 12/16
16-08	Social adjustment in adolescent survivors of pediatric CNS tumors	Fiona Schulte	Overall	Maximum TD for brain and brain four segments	Completed 9/16
16-10	Secondary Cancers among NF1 cancer survivors	Smita Bhatia	Overall	Y/N for RT, maximum TD to body regions	Completed 9/16
16-11	Neurocognitive functioning in survivors of osteosarcoma	Nina Kadan-Lottick	Original	Y/N for RT, maximum TD to chest/neck	Completed 9/16



Concept #	Study Title	Study PI	Cohort	Dosimetry Data Required	Dosimetry Status
16-12	Prevalence and patterns of prescription psychoactive medication use in adolescent survivors of childhood cancer: A report from the Childhood Cancer Survivor Study	Yin Ting Cheung	Overall	Y/N for RT: any and cranial, maximum TD to Brain	Completed 9/16
16-13	Sleep behaviors and patterns and their relationship to health and mental health outcomes in adult survivors of childhood cancers	Lauren Daniel	Overall	Y/N for RT: any, cranial, and chest	Completed 9/16
16-14	Long-term incidence of anorectal complications among childhood cancer survivors	Christopher Weldon	Overall	Y/N for RT to abdomen and pelvis, maximum TD for abdomen and pelvis body regions	Completed 9/16
16-15	Incidence, predictors and impact of hearing impairment in long-term survivors of childhood cancer	Austin Brown	Overall	maximum TD for posterior fossa and temporal lobe brain segments (surrogate for cochlea)	Completed 9/16
16-16	Incidence of chronic disease among childhood cancer survivors by treatment era and temporal trends in treatment exposure	Todd Gibson	Overall	maximum TD for Body Regions, Y/N for RT: any, chest, abdominal, CSI, and/or pelvis	Completed 9/16
16-17	Psychological distress, functional dependence and neurologic morbidity among adult survivors of childhood cancer treated with CNS-directed therapies	Stephanie Vuotto	Overall	Cranial RT Y/N, maximum TD for brain and brain four segments	Completed 9/16
16-18	Incidence of cardiac outcomes by treatment era and temporal trends in treatment exposure in adult survivors of childhood cancer	Daniel Mulrooney	Expanded	Average dose to heart	Completed: Average doses completed 1/16 V <sub>5</sub> , V <sub>10</sub> , V <sub>15</sub> , V <sub>20</sub> completed 12/16

Concept #	Study Title	Study PI	Cohort	Dosimetry Data Required	Dosimetry Status
16-19	The Effects of neurofibromatosis type 1 on late outcomes in adult survivors of childhood cancer	Peter de Blank	Overall	Y/N for any RT	Y/N data will be provided by Statistics and Data Center
16-20	Psychological, behavioral, and educational outcomes in pediatric acute myeloid leukemia survivors	Kristen Stefanski	Overall (AML only)	Y/N for any RT, Max TD for cranial radiation, cranial and spine radiation, Total CNS radiation, and TBI dose	Data was provided in 9/16.
17-01	Exercise and late mortality in 5-year survivors of childhood cancer: A report from the Childhood Cancer Survivor Study	Lee Jones	Overall	Max TD for chest	Completed 12/16
17-02	Projections in trends in life expectancy and quality-adjusted life expectancy among childhood cancer survivors	Jennifer Yeh	Overall	Y/N for RT, maximum TD for body regions, TBI dose	Completed 12/16
17-04	Predictors of longitudinal pain in long-term survivors of childhood cancer: A report from the Childhood Cancer Survivor Study	Cynthia Karlson	Original	Y/N for any RT, Y/N for cranial RT, maximum TD for brain	Completed 12/16
17-05	Quantifying the individual absolute risk of premature ovarian failure in female survivors of childhood cancer	Yan Yuan	Overall (female)	Max TD for abdomen and pelvis body regions, and age at exposure, average dose to left ovaries and pituitary, TBI dose,	Max TD to abdomen and pelvis, and TBI dose completed 12/16 Ovary dose completed for original 5/14 and expansion 5/17 Average pituitary doses completed original (9/14) and expansion (10/17)
17-06	Subsequent neoplasms among survivors of childhood cancer not previously treated with radiation	Lucie Turcotte	Overall	Y/N for RT and maximum TD for body regions	Completed 12/16

Concept #	Study Title	Study PI	Cohort	Dosimetry Data Required	Dosimetry Status
17-07	Financial Toxicity in Survivors of Childhood Cancer and Their Siblings: A Proposal to Include a Financial Toxicity Instrument in the Follow-Up 6 Survey	Paul Nathan	Overall	Y/N for any RT	N/A
17-08	Cost-Effective Cardiomyopathy Surveillance Strategies in Childhood Cancer Survivors.	Matthew Ehrhardt	Overall	Average heart dose	Average doses completed for original cohort 1/12; expanded cohort 1/16
17-09	Adherence to Surveillance for Second Malignant Neoplasms and Cardiac Dysfunction in the CCSS Cohort.	Paul Nathan	Overall	Max TD for chest, abdomen, and pelvis body regions, spine and TBI dose; any radiation exposure to a field that includes the heart	Max TD to chest, abdomen, and pelvis, and spine TBI dose completed 12/16 Heart in-beam variable to be discussed with PI
17-10	Trends in Utility-based Health-related Quality of Life Among Childhood Cancer Survivors	Jennifer Yeh	Overall	Y/N for RT and Y/N for chest RT; if yes, chest dose	Y/N for chest RT and chest doses completed 12/16
17-11	Breast Cancer Risk in the Modern Treatment Era: A Report from the Childhood Cancer Survivor Study	Tara Henderson	Overall	Y/N for RT and Y/N for chest RT; if yes, chest dose. Type of chest field	Y/N for chest RT and chest doses completed 12/16. Field categories completed original for 01/18 and expansion 11/17
17-12	Physical activity as a predictor of neurocognitive outcomes in adult survivors of childhood cancer	Kim Edelstein	Overall	Chest body region dose and CNS dose	Data was provided in 9/16

Concept #	Study Title	Study PI	Cohort	Dosimetry Data Required	Dosimetry Status
17-13	Infertility, assisted reproductive technology utilization and pregnancy outcomes in childhood cancer survivor population: a CCSS and SART CORS data linkage study	Kimberly Keefe	Overall, female	Max TD for abdomen, pelvis, TBI dose, and averaged doses pituitary gland, ovaries (left and right).	Max TD for abdomen, pelvis, TBI dose completed 12/16. Average pituitary doses completed for original 9/14 and expansion 10/17 Ovary dose completed for original 5/14 and expansion 5/17
17-14	Racial/Ethnic Differences in Neurocognitive, Psychological and Quality of Life Outcomes in Adult Survivors of Childhood Cancers	Stephanie Dixon	Overall	Y/N Y/N for cranial RT and CNS dose	Completed 12/16
17-15	A Genome-Wide Association Study of Stroke and Myocardial Infarction among Long-term Survivors of Childhood Cancer	Daniel Bowers	Original	Max TD for brain, neck, and chest, average heart and pituitary doses	Max TD data completed 12/16. Average heart doses completed for original cohort 1/12 Average pituitary doses completed 9/14
17-16	Genetic Architecture of Diabetes Mellitus in Long-term Survivors of Childhood Cancer.	Nisha Rathore	Original	Y/N for RT, Y/N for brain, abdomen, and TBI, doses for brain, abdomen, and TBI Average pancreas dose will also be included in analysis	Completed 12/16
17-17	Chronic Pain in Adult Survivors of Childhood Cancer: Utilization of the Childhood Cancer Survivor Study mHealth Platform in Assessing Pain and Wearable Sensor Technology.	Nicole Alberts	Overall	Y/N for all body regions, maximum TD for body regions	Completed 12/16

Concept #	Study Title	Study PI	Cohort	Dosimetry Data Required	Dosimetry Status
17-18	Association between special education services, educational attainment, and chronic health conditions among long-term childhood cancer survivors.	Lisa Bashore	Overall	Y/N for brain; maximum TD for brain and brain four segments	Completed 12/16
17-19	Long-term Gallbladder and Biliary Disease in Survivors of Childhood Cancer: A Report from the Childhood Cancer Survivor Study.	Bryan Dieffenbach	Overall	Maximum TD for body regions, and TBI dose, Y/N Abdomen 4-segment	Completed 12/16 Abdomen 4-segment variable expected Q1 2019
17-20	GWAS of Childhood Cisplatin-induced Tinnitus and Meta-Analysis with Adult GWAS of Cisplatin-induced Tinnitus	M. Eileen Dolan	Overall	Max TD for brain	Completed 12/16
18-01	Self-Reported Neuropsychological Outcomes in Adult Survivors of Neuroblastoma.	Caroline Hesko	Overall Neuroblastoma	Maximum TD for brain, chest, and pelvis	Completed 12/16
18-03	Temporal trends in late-onset morbidity and mortality in rhabdomyosarcoma survivors	Pooja Hingorani	Overall Rhabdomyosarcoma	Y/N for all body regions	Completed 12/16
18-04	Frailty in childhood cancer survivors.	Samah Hayek	Overall	Maximum TD for body regions	Completed 12/16
18-05	Genome-Wide Association Study (GWAS) of Late-occurring Intestinal Obstruction	Arin Madenci	Original	Maximum TD for body regions	Completed 12/16
18-06	Long-term Follow up of Survivors of Childhood Osteosarcoma: A Report from the Childhood Cancer Survivor Study (CCSS)	Kerri Beckett	Overall	Y/N for chest RT	Completed 12/16
18-07	Changes in long-term outcomes in neuroblastoma survivors treated with Contemporary therapies: A report from the Childhood Cancer Survivor Study	Danielle Novetsky Friedman	Overall Neuroblastoma	Y/N and max TD for brain, chest, and abdomen RT; TBI dose	Completed 12/16

Concept #	Study Title	Study PI	Cohort	Dosimetry Data Required	Dosimetry Status
18-09	Health care utilization by survivors of childhood cancer	Paul Nathan	Overall	Y/N for all body regions and TBI	Completed 12/16
18-11	The impact of chronic conditions on the psychosexual function of adult female survivors of childhood cancer	Kari Bjornard	Overall Female	Y/N and dose for brain, chest, abdomen, and pelvis body regions	Completed 12/16
18-12	Prevalence and predictors of loneliness in young adult survivors of childhood cancer	Ameera Fayad	Overall	Y/N and max TD for the brain	Completed 12/16
18-14	Long-term outcomes among survivors of childhood acute myeloid leukemia	Lucie Turcotte	Overall AML	Y/N and max TD for all body regions and TBI dose	Completed 12/16
18-15	Exercise and chronic health conditions and health care utilization in adult survivors of childhood cancer	Lee W. Jones	Overall	Y/N for RT, Y/N for chest, abdomen, or pelvis; RT, body region doses for chest	Completed 12/16
18-16	Long-term outcomes of survivors of childhood Acute Lymphoblastic Leukemia (ALL) across 30-years of treatment: a report from the Childhood Cancer Survivor Study	Stephanie Dixon	Overall ALL	Y/N for TBI and CSI, max TD for brain	Completed 12/16
18-18	Determinants of longitudinal health-related quality of life changes in adult survivors of childhood cancer: A report from the Childhood Cancer Survivor Study	Maritza Ruiz	Overall	Y/N for RT, Y/N for chest, abdomen, or pelvis	Completed 12/16
18-20	Incidence of and risk factors for late end stage renal disease in survivors of childhood cancer	Bryan Dieffenbach	Overall	Y/N for all body regions and TBI, and kidneys, maxTD for body regions, and average kidney dose (right and left)	Completed 12/16 except for kidney doses (expected 5/19)

Concept #	Study Title	Study PI	Cohort	Dosimetry Data Required	Dosimetry Status
19-01	Genome wide association study of modulators of pregnancy in long term survivors of pediatric cancer	Seth Rotz	Original	Y/N for all body regions	Completed 12/16
19-02	Genetic risk prediction profiles for fracture among childhood cancer survivors	Cindy Im	Original	Chest body region dose and CNS dose	Completed 12/16
19-03	Physical functioning and chronic health conditions in pediatric Acute Lymphoblastic Leukemia and Non-Hodgkin Lymphoma survivors treated with contemporary Therapy	Kari Bjornard	Overall ALL/NHL	brain body region dose and CNS dose	Completed 12/16
19-05	Genetic susceptibility to neurocognitive impairment secondary to childhood cancer treatment	Michael E. Scheurer	Original	Y/N and maxTD for all body regions	Completed 12/16
19-06	Peripheral motor and sensory neuropathy and associated outcomes in long-term survivors of childhood cancer	Rozalyn Rodwin	Overall	Y/N for RT, spine, and TBI; maxTD for brain	Completed 12/16
19-07	Thirty-five year follow-up of childhood Wilms tumor: Impact of treatment era on long-term health outcomes	Brent Weil	Overall Wilms tumor	Y/N and dose flank RT, whole abdomen, and whole lung	In queue for summer 2019
19-08	Lung Cancer as a Subsequent Malignant Neoplasm in Survivors of Childhood Cancer: A Report from the Childhood Cancer Survivor Study	Taumoha Ghosh	Overall	Y/N and maxTD for chest RT; Type of chest field	Y/N and maxTD for chest completed 12/16. Field categories completed original for 01/18 and expansion 11/17

Concept #	Study Title	Study PI	Cohort	Dosimetry Data Required	Dosimetry Status
19-09	Outcomes of adult survivors of childhood astrocytoma and ependymoma across three decades of diagnosis and treatment, A Report from the Childhood Cancer Survivor Study	Peter de Blank	astrocytoma and ependymoma		
19-10	Long-term burden of major surgical procedures in Survivors of childhood cancer: A report from the Childhood Cancer Survivor Study	Bryan Dieffenbach			
19-11	Predictors of neurocognitive and psychosocial outcomes in long-term survivors of Hodgkin Lymphoma: A report from the Childhood Cancer Survivor Study	AnnaLynn Williams	Hodgkin Lymphoma		
19-12	A genome-wide association study of hypertension in adult survivors of childhood cancer	Jeanne Pierzynski			

Abbreviations: tumor dose (TD), radiation therapy (RT), cranial spinal irradiation (CSI)



## Radiation Therapy Record Status: Combined Cohort

INSTITUTION (#)	Records received		Records processed		Body Region Dosimetry Status	
	Original	Expanded	Original	Expanded	Original	Expanded
Cohort:						
Children's Hospital at Stanford University (04)	386	144	386	144	Complete	Complete
Nationwide Children's Hospital (16)	391	173	391	173	Complete	Complete
Children's Hospital of Los Angeles (22)	279	173	279	173	Complete	Complete
Children's Hospital of Philadelphia (20)	492	355	492	355	Complete	Complete
Children's Hospital of Pittsburgh (03)	387	254	387	254	Complete	Complete
Children's National Medical Center (07)	113	9	113	9	Complete	Complete
City of Hope (29)	-	55	-	55	-	Complete
Dana-Farber Cancer Institute (05)	428	240	428	240	Complete	Complete
Emory University (06)	69	226	69	226	Complete	Complete
Mayo Clinic (18)	299	-	299	-	Complete	-
Memorial Sloan-Kettering Cancer Center (09)	377	214	377	214	Complete	Complete
Minneapolis Children's Medical Center (19)	145	183	145	183	Complete	Complete
Riley Hospital for Children, IN University (24)	209	189	209	189	Complete	Complete
Roswell Park Cancer Institute (17)	221	96	221	96	Complete	Complete
Seattle Children's Hospital (12)	274	267	274	267	Complete	Complete
St. Jude Children's Research Hospital (15)	979	938	979	938	Complete	Complete
St. Louis Children's Hospital (21)	228	132	228	132	Complete	Complete
Texas Children's (Baylor) (10 [original], 28 [expanded])	220	104	220	104	Complete	Complete
Children's Hospital Colorado (02)	377	180	377	180	Complete	Complete
Toronto Hospital for Sick Children (13)	697	-	697	-	Complete	-
U.T.M.D. Anderson Cancer Center (08)	408	196	408	196	Complete	Complete
UAB/The Children's Hospital of Alabama (25)	97	91	97	91	Complete	Complete
UCLA Mattel Children's Hospital (23)	250	21	250	21	Complete	Complete
University of California at San Francisco (11)	236	109	236	109	Complete	Complete
University of Michigan - Mott Children's Hospital (26)	431	212	431	212	Complete	Complete
University of Minnesota (01)	370	84	370	84	Complete	Complete
UT - Southwestern Medical Center (27)	147	175	147	175	Complete	Complete
Children's Hospital of Orange County (30)	-	86	-	86	Complete	Complete
University of Chicago Comer Children's Hospital (31)	-	88	-	88	Complete	Complete
Lurie Children's Hospital of Chicago (32)	-	134	-	134	Complete	Complete
Cook Children's Medical Center (33)	-	94	-	94	Complete	Complete
Total by cohort	8510	5222	8510 (100%)	5222 (100%)	8510 (100%)	5222 (100%)
Combined Total	13,732		13,732 (100%)		13,732 (100%)	

## Summary of RT Data Analysis Completed Prior to 2015

Study (Proposal #)	Study PI	Number exposed to RT or in study	Dosimetry required	Dosimetry status
<b>Case control studies</b>				
CNS SMNs	<i>Neglia</i>	452	Dose to specific tumor locations	Complete Sept 2003
Thyroid SMNs	<i>Sigurdson</i>	293	Dose to thyroid and pituitary.	Complete Mar 2003
Breast SMNs	<i>Inskip</i>	463	Dose to specific breast locations	Complete Jul 2005
Pregnancy Outcomes	<i>Boice</i>	2100	Dose to gonads, uterus, pituitary	Complete Jul 2004
Bone/ Soft Tissue SMNs	<i>Henderson</i>	438	Dose to specific tumor locations	Complete Apr 2007
Non-melanoma Skin Ca	<i>Mertens</i>	612	Dose to specific tumor locations	Complete Apr 2010
Renal carcinoma	<i>Wilson / Ness</i>	~8500	Average kidney doses (left and right reported separately)	Complete Aug 2011
<b>Cohort studies</b>				
Thyroid Function	<i>Sklar</i>	1415	Dose to thyroid	Complete Mar 1999
Obesity	<i>Oeffinger</i>	3931	Brain dose in 500 cGy categories	Complete Nov 2000
CNS Non-Neurological Outcomes	<i>Gurney</i>	1219	Dose categories for brain, spine, thyroid, ovaries	Complete Oct 2001
CNS Neurological Outcomes	<i>Packer</i>	1219	Dose to 4 regions of brain	Complete Oct 2001
CNS Psychological	<i>Zebrack &amp; Turk</i>	1219	Dose to 4 regions of the brain	Complete Aug 2002
Pregnancy Outcomes	<i>Green</i>	1327	Pituitary dose categories: females	Complete Sept 2002
Growth Hormone	<i>Sklar</i>	176	Dose for pituitary and direct spine	Complete Sept 2002
Premature Menopause	<i>Sklar</i>	1565	Pituitary, uterus and ovaries.	Complete Mar 2003
Stroke	<i>Oeffinger</i>	8583	Dose to 4 brain regions	Complete Dec 2003
Low birth weight and premature births	<i>Boice</i>	728	Proximity of gonads to treatment field	Complete Jun 2004
Ovarian Failure	<i>Sklar</i>	203	Dose to ovaries, uterus & pituitary	Complete Aug 2004
Wilms	<i>Breslow</i>	678	Dose to chest, abdomen, pelvis	Complete Jan 2004
Growth hormone use and meningiomas	<i>Sklar</i>	~8500	Maximum dose to any part of the brain	Complete Jul 2005
Pulmonary Function	<i>Mertens</i>	~8500	First-pass regions treated	Complete 2005
Osteoporosis and avascular necrosis	<i>Kadan-Lottick</i>	~8500	Dose to gonads and pituitary and maximum brain dose	Complete Dec 2005
Fertility among survivors	<i>Green</i>	5624	Dose to gonads and pituitary	Complete Oct 2005, Jan 2006, Sept 2007
Bone Marrow Transplant	<i>Baker/ Chow</i>	379	Dose to cranium	Complete Mar 2006
Dental Outcomes	<i>Kaste</i>	5632	Total average dose to the teeth	Complete Nov 2006
Thyroid exposure /ALL patients	<i>Chow</i>	2389	Dose to thyroid and pituitary	Complete Feb 2007
Stillbirth and neonatal death	<i>Boice / Signorello</i>	2805	Dose to ovaries, uterus, testes, pituitary	Complete Jun 2006
Menarche timing	<i>Armstrong</i>	299	Dose to ovaries and pituitary	Complete Feb 2007
Hodgkin Disease Outcomes	<i>Castellino</i>	1551	Dose range to body regions	Complete Jun 2007
Carotid Artery Dose	<i>Ness/Gurney</i>	50	Dose to the carotid artery	Complete Jul 2007
Thyroid exposure /entire cohort	<i>Bhatti / Sigurdson</i>	8494	Dose to thyroid	Complete Nov 2007

Study (Proposal #)	Study PI	Number exposed to RT or in study	Dosimetry required	Dosimetry status
BRIEF neuro-psych outcomes	<i>Ness</i>	~8500	Dose to 4 brain regions	Complete Nov 2007
Cardiac outcomes	<i>Mulrooney</i>	~8500	Average dose to heart	Complete Feb 2008
Cataract cohort	<i>Chodick / Inskip</i>	~8500	Dose to lens	Complete Feb 2008
Visual complications	<i>Mertens / Whelan</i>	~8500	Dose to eye and brain	Complete Feb 2008
Breast screening	<i>Oeffinger</i>	3913	Yes/No and body region treated	Complete Feb 2008
Pain	<i>Ness</i>	~8300	Body sites, dose to 4 brain regions	Complete Apr 2008
Salivary gland tumors	<i>Inskip</i>	~8500	Dose to salivary glands or sites of treatment	Complete May 2008
Psychosexual outcomes/ females	<i>Sklar</i>	1412	Dose to ovaries and pituitary	Complete Feb 2009
Wilms Tumor long term follow-up	<i>Termuhlen</i>	717	Dose to heart and kidneys	Complete Oct 2009
TBI/BMT Leukemia Cohort	<i>Baker and Chow</i>	2722	Dose to thyroid, gonads, brain, spine	Complete Jan 2010
Obesity	<i>Green</i>	5632	Pituitary	Complete Jan 2010
Fertility	<i>Green</i>	4023	Ovaries and pituitary	Complete Jan 2010
GI second cancers	<i>Henderson</i>	46	SMN site in/near/out treatment field	Complete Jan 2010
ECHOS	<i>Cox / Hudson</i>	883	Treatment dose and body region	Complete Jun 2010
Pregnancies during treatment	<i>Mulvihill</i>	16	Therapy records	Complete Sept 2010
GU complications	<i>Shnorhavorian / Sklar</i>	8507	Dose to kidneys, ureters, bladder	Complete Dec 2010
Stroke – first and recurrent	<i>Fullerton / Mueller</i>	8633	Maximum dose to brain – existing dosimetry CNS, HD, Leukemia	Complete Dec 2010
Functional Outcomes	<i>Ness / Marina</i>	1094	Maximum dose to limb, pelvis, chest	Complete Feb 2011
Pulmonary complications	<i>Huang</i>	1876	Average dose to heart and lungs for CNS patients	Complete Apr 2011
Cranial Radiation	<i>Brinkman</i>	6875	Maximum TD by brain region	Complete May 2011
Oocyte radiosensitivity	<i>Hamish</i>	4324	Dose to ovaries	Complete Mar 2011
CNS Longitudinal Patterns of Late Effects	<i>Hardie</i>	923	Maximum TD by brain region	Complete Oct 2011
Longitudinal Changes in Health Status	<i>Hudson / Oeffinger</i>	8507	Used existing maximum TD by region	Complete Feb 2011
Male Infertility	<i>Seidel</i>	7717	Dose to testes and pituitary	Complete Mar 2011
Obesity among ALL survivors	<i>Kamdar</i>	1215	Maximum TD to spine and brain regions	Complete Nov 2011
Cardiac Outcomes – Risk model	<i>Chow</i>	8507	Maximum TD to chest and abdomen, heart average	Complete Jan 2012
BCC SMN – Genetic Risk	<i>Davies</i>	1282	Maximum TD by body region and brain region	Complete Nov 2012

Study (Proposal #)	Study PI	Number exposed to RT or in study	Dosimetry required	Dosimetry status
NCI-GWA SMN risk	<i>Morton</i>	8507	Maximum TD by body region and brain region + specific organs and ABM for GWAS group	Complete - Body region dosimetry Dec 2013; other organs Dec 2014, ABM for GWAS subgroup Feb 2014
NCI-GWA – methods (13-16)	<i>Morton</i>	8507	Comparison of radiation dose reconstruction methods for SMN studies	Complete - Body region dosimetry Dec 2013; other organs Dec 2014
Lifestyle factors and pregnancy outcomes	<i>Gawade</i>	3567	Females. Ovary, uterus and pituitary dose previous run.	Complete Oct 2012
HL-Health Status	<i>Effinger</i>	1675	Maximum TD by body region-update	Complete Nov2012
Ewings – Longitudinal (12-09)	<i>Neyssa Marina</i>	575	Maximum TD by body region	Complete Jul 2013
Exercise	<i>Lee Jones</i>	14370	Maximum TD by body region	Complete Aug 2013
Intestinal obstruction (13-07)	<i>Arin Mandenci</i>	14370	Maximum TD by body region	Complete Aug 2013
STS chronic disease (13-04)	<i>Emily Mueller</i>	1726	Maximum TD by body region	Complete Oct 2013
Pulmonary (13-11)	<i>Andrew Dietz</i>	12846	Maximum TD by body region +lung dose	Complete Mar 2014
Testicular SMN	<i>Oeffinger</i>	14370	Maximum TD by body region + testes dose and testes proximity to nearest treatment field	Complete Dec 2013
Disease Burden (14-03)	<i>Jennifer Yeh</i>	14364	Maximum TD by body region +heart dose	Complete Mar 2014
Alcohol consumption (13-20)	<i>Tara Brinkman</i>	3806	Maximum TD to brain segments + TBI	Complete Apr 2014
Cost Effectiveness of COG LTFU screening guidelines for breast (12-14)	<i>Lennie Wong</i>	6645 (females)	Maximum TD to the chest, pelvis, TBI dose, Mantle Y/N, typical breast quadrant for patients with mantle treatments	Complete Aug 2014
Endocrine (14-02)	<i>Sogol Mostoufi-Maob</i>	14290	Maximum TD to body regions + thyroid, pituitary and gonads	Complete Sept 2014

## Applications of Intent (AOI) to Conduct Research

Date Received	Title	Author/ Institution	Secondary Working Group(s)	Date Investigator Notified	AOI Outcome	Concept to Publication Committee
<b>CANCER CONTROL AND INTERVENTION</b>						
05.21.08	The Influence of Geographical Proximity to a Cancer Center on Risk Based Care among Childhood Cancer Survivors	Caplin/Utah Oeffinger/MSKCC		06.10.08	Approved	Approved
05.27.08	Longitudinal Changes in Health Status	Hudson/SJCRH	Chronic Disease Psychology	07.16.08	Approved	Approved
06.02.08	Risk-Based Health Evaluation of CCSS Participants (CPIR)	Green/SJCRH	Chronic Disease	07.16.08	Approved	Approved
06.05.08	A Comparison of Functional Outcomes between Sarcoma Survivors with Surgery or Radiation As Their Local Control	Marina/Stanford	Chronic Disease	07.16.08	Approved	Approved
06.05.08	Physical Activity in Lower Extremity Sarcoma Survivors with Amputation	Ness/SJCRH	Chronic Disease	07.16.08	Approved	Approved
06.05.08	A Comparison of Functional Outcomes between UE and LE Sarcoma Survivors	Marina/Stanford	Chronic Disease	07.16.08	Approved	Approved
06.05.08	Neurocognitive Problems and Health Behavior Outcomes	Krull/SJCRH	Psychology	07.16.08	Approved	Approved
06.18.08	Understanding Health Care Utilization Patterns and Changes Occurring over a Decade: A Report from the Childhood Cancer Survivor Study	Casillas/UCLA		07.16.08	Approved	Approved
10.14.08	Investigating the Needs of Childhood Cancer Survivors: Understanding Residual Treatment Effects (INSURE) (Ancillary Study)	Cox/SJCRH	Chronic Disease	11.12.08	Approved	Approved
04.07.09	Predictors of Smokeless Tobacco Use among Survivors of Childhood Cancer	Klosky/SJCRH		05.12.09	Approved	Approved
06.21.09	Mental Health and Tobacco Use Among Childhood Cancer Survivors: A Longitudinal Analysis	Lown/Alcohol Research Group	Psychology	07.10.09	Approved	Approved

Date Received	Title	Author/ Institution	Secondary Working Group(s)	Date Investigator Notified	AOI Outcome	Concept to Publication Committee
<b>Cancer Control and Intervention (Continued)</b>						
08.06.09	Identifying Intervention Targets to Increase Mammography Screening among At-Risk Childhood Cancer Survivors	Cox/SJCRH	SMN	09.09.09	Approved	Approved
11.13.09	Prevalence and Predictors of Smoking Cessation in Childhood Cancer Survivors	Gibson/SJCRH		12.22.09	Approved	Approved
02.12.10	Mental Health, Tobacco & Alcohol Use in Survivors and Siblings (Ancillary Study)	Lown/Alcohol Research Group		03.03.10	Approved	Not Funded
03.08.10	Determinants of Employment	Stone/UCLA			Withdrawn due to overlap	_____
06.10.10	Longitudinal Assessment of Physical Activity	Ness/SJCRH	Chronic Disease Psychology	06.25.10	Approved	Approved
03.16.11	Diet and Insulin Resistance in Survivors of Childhood Leukemia	Tonorezos/Sloan Kettering	Chronic Disease	03.29.11	Approved	Not Approved
03.16.11	Risk Reduction Strategies To Prevent Subsequent Skin Cancer	Geller/Harvard	SMN Epi/Biostats	03.29.11	Approved	Approved
03.22.11	Longitudinal Changes of Health Risk Factor Clusters and Relationship to Morbidity in Adult Survivors of Childhood Cancer	Hijiya/Northwestern	Chronic Disease Psychology	04.13.11	Approved	Approved
04.13.11	Modifiable Lifestyle Factors and Risk of a Secondary Breast Cancer	Rosenberg/Harvard	SMN		Withdrawn	_____
04.14.11	Cost-effectiveness of Colorectal Cancer Screening Among Survivors Treated with Abdominal Radiation Therapy	Hodgson/Princess Margaret Hospital	SMN	05.30.11	Approved	_____
06.15.11	Chronic Health Conditions and Employment Status Transitions for Childhood Cancer Survivors	Kirchhoff/Huntsman Cancer Institute Salt Lake City	Chronic Disease	07.26.11	Approved	Withdrawn
06.30.11	The Impact of Location and Type of Follow-Up Care On Morbidity and Mortality in Childhood Cancer Survivors	Nathan/Sick Kids	Chronic Disease Epi/Biostats	07.13.11	Approved	Withdrawn
08.01.11	Health Behaviors and Mammogram Utilization in the CCSS	Rosenberg/Harvard School of Public Health	Psychology	08.16.11	Approved	Approved

Date Received	Title	Author/ Institution	Secondary Working Group(s)	Date Investigator Notified	AOI Outcome	Concept to Publication Committee
<b>Cancer Control and Intervention (Continued)</b>						
09.09.11	The Health System Use and Cost Implications of Amputation vs. Limb Salvage Surgery	Conti/University of Chicago	Psychology	09.23.11	Approved	Withdrawn
09.29.11	Colorectal Screening Practices of Survivors of Childhood Cancer at Risk for Secondary Colorectal Malignancies	Kohler/UAB	SMN Psychology	11.07.11	Approved	Approved
12.02.11	Health Status Outcomes in Survivors of Hodgkin Lymphoma	Marina/Stanford			Withdrawn	_____
12.06.11	Evaluation of the Association Between Lifestyle Factors and Pregnancy Outcomes	Gawade/SJCRH	Epi/Biostats Psychology	01.04.12	Approved	Approved
12.09.11	Information Needs of Childhood Cancer Survivors and their Families	Mendonca/U. of Wisconsin	Epi/Biostats	01.04.12	Approved	Not Approved
01.27.12	Influence of Lifestyle on Site-Specific Cumulative Incidence For Second Primary Malignancies in Five-Year Survivors of a Childhood Cancer	Kovalchik/NIH	SMN	03.07.12	Withdrawn	_____
03.01.12	Tobacco Use Among Adult Siblings of Childhood Cancer Survivors	Buchbinder/CHOC	Psychology	03.21.12	Approved	Approved
04.26.12	Association Between Exercise Behavior and Incidence of Non-cancer Chronic Health Conditions	Jones/Duke	Chronic Disease Psychology	05.10.12	Approved	Approved
06.07.12	Receipt of a Treatment Summary and Its Relationship to Morbidities and Premature Mortality	Ford/MSKCC		07.16.12	Approved	Approved
06.07.12	Association of Surgical Procedure to Health Status in Sarcoma Survivors	Avedian/Stanford	Chronic Disease	07.16.12	Approved	Withdrawn
06.20.12	The Consequences of Childhood Cancer on Employer-Sponsored Health Insurance and Social Security Benefits	Kirchhoff/Utah		07.16.12	Approved	Approved
07.11.12	Survival Burden in Childhood Cancer Survivors	Henderson/Univ. of Chicago	Chronic Disease SMN	08.28.12	Withdrawn	-----

Date Received	Title	Author/ Institution	Secondary Working Group(s)	Date Investigator Notified	AOI Outcome	Concept to Publication Committee
<b>Cancer Control and Intervention (Continued)</b>						
09.11.12	Longitudinal Evaluation of Chronic Disease and Health Perceptions in Soft Tissue Sarcoma Survivors	Mueller/Univ. of Michigan	Chronic Disease Psychology	09.18.12	Approved	Approved
09.17.12	The Socio-economic Outcomes of Siblings of Childhood Cancer Survivors	Henderson/Univ. of Chicago		10.05.12	Approved	On Hold
10.24.12	Cancer Screening in Childhood Cancer Survivors: Grounded Theory and Discourse Analysis	Tripp/MD Anderson		11.20.12	Approved	Withdrawn
11.01.12	Evaluating Socioeconomic and Health-Related Pathways That Predict Smoking in Survivors of Childhood Cancer	Erinosho/UNC	Psychology	11.20.12	Approved	Withdrawn
11.19.12	Health Beliefs and Behaviors: Cohort Studies in Childhood Cancer Survivors Ancillary Study (K07)	Henderson/University of Chicago	SMN	01.10.13	Approved	_____
05.21.13	The Impact of Chronic Disease on Health Care Utilization in the CCSS Cohort	Nathan/Sick Kids		05.30.13	Approved	Approved
05.21.13	Health Status Among Adult Survivors of Childhood Cancer by Treatment Era	Ness/SJCRH		05.30.13	Approved	Approved
06.10.13	Social Outcomes in Aging Hodgkin Lymphoma Survivors	Effinger/Stanford		07.23.13	Not Approved	_____
07.07.13	EQUAL: Exercise and Quality Diet After Leukemia (Ancillary Study)	Tonorezos/MSKCC	SMN/Psychology	07.24.13	Approved	Pending
08.05.13	Longitudinal Evaluation of Health Status and Social Functioning in Survivors of Pediatric Astrocytomas	Effinger/Stanford	Chronic Disease Psychology	08.19.13	Approved	Approved
08.06.13	Examining the Role of Transitional Care in Facilitating Quality Clinical Health Care and Preventive Services for Adults Survivors of Childhood Cancer	Mertens/Emory			On Hold	On Hold
08.09.13	Health Care Utilization for Childhood Cancer Survivors	Mueller/U. of Michigan	Chronic Disease	08.19.13	Approved	Approved



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<b>Cancer Control and Intervention (Continued)</b>						
08.30.13	The Impact of Endocrine Disorders on Physical Activity and Functional Outcomes	Pradhan/ Riley	Psychology Chronic Disease	09.26.13	Approved	Approved
09.24.13	Behavioral and Psychosocial Predictors of Health Behaviors among Adolescent/Young Adult Survivors	Wu/Univ. of Utah	Psychology	10.07.13	Withdrawn	_____
10.23.13	Social Support and Health Care Utilization	Wu/Univ. of Utah	Psychology Chronic Disease	11.07.13	Approved	Withdrawn
11.02.13	Stages of Change and Predictors of Mammography Practices of Female Survivors of Childhood Cancer and Siblings	Szalda/CHOP		12.05.13	Approved	Withdrawn
01.06.14	Longitudinal Mammogram Practices	Moskowitz/MSKCC	SMN	02.11.14	Approved	Approved
01.05.14	Does Intention to Undergo Screening Mammography Predict Future Screening?	Ford/MSKCC	SMN	02.11.14	Approved	Pending
04.23.14	EMPOWER Study: Promoting BC Screening in Women Who Survived Childhood Cancer (Ancillary Study)	Oeffinger/MSKCC	SMN	04.23.14	Approved	Approved
04.23.14	ECHOS (Ancillary Study)	Hudson/SJCRH		04.23.14	Approved	Approved
09.02.14	Patient-reported Concerns	Gibson/SJCRH	Epi/Biostats Psychology	09.21.14	Approved	Approved
10.06.14	Physical Functioning in Pediatric Leukemia and Lymphoma Survivors	Le/Yale		10.06.14	Approved	Pending
10.17.14	Financial Burden of Medical Care	Fair/University of Utah	Chronic Disease	10.06.14	Approved	Approved
11.24.14	Understanding Experiences of Childhood Cancer Survivors after ACA Implementation (Ancillary Study)	Park/Harvard	Chronic Disease	12.17.14	Approved	Approved
11.24.14	Financial Burden in Survivors of Childhood Cancer	Nip/Harvard		12.17.14	Approved	Approved

Date Received	Title	Author/ Institution	Secondary Working Group(s)	Date Investigator Notified	AOI Outcome	Concept to Publication Committee
<b>Cancer Control and Intervention (Continued)</b>						
12.05.14	Health Status in Extremity Sarcoma Survivors	Marina/Stanford	Chronic Disease	12.23.14	Approved	Withdrawn
12.05.14	Trajectory of Mammography and Breast MRI among High Risk Women	Ford/MSKCC		12.23.14	Approved	Pending
06.11.15	Effects of Home-based Interval Training on Fitness and Physical Activity (Ancillary Study)	Ness/SJCRH	Chronic Disease Epi/Biostats	08.12.15	Approved	Pending
11.20.15	Return of Genomic Results to Research Participants (Ancillary Study)	Henderson/University of Chicago	Genetics Psychology	12.02.15	Approved	Withdrawn
11.20.15	Advancing Skin Cancer Screening Practices among Survivors of Childhood Cancer and Skin Cancer (ASK2) (Ancillary Study)	Geller/Harvard School of Public Health	SMN	12.02.15	Approved	Withdrawn
01.21.16	EMPOWER II Study: Promoting BC Screening in Female Survivors and Their Physicians (Ancillary Study)	Oeffinger, Ford/MSKCC	SMN	02.23.16	Approved	Pending
11.22.16	Compliance with Surveillance for SMNs and Cardiac Dysfunction in CCSS	Nathan/Hospital for Sick Children	Chronic Disease SMN	12.08.16	Approved	Approved
12.06.16	Exercise and Late Mortality in 5-Year Survivors of Childhood Cancer	Jones/MSKCC	Chronic Disease Epi/Biostats	12.16.16	Approved	Approved
03.07.17	Health Care Utilization and Estimated Costs Among Survivors of Childhood Cancer	Nathan/Sick Kids	Chronic Disease Epi/Biostats	04.04.17	Approved	Approved
06.07.17	Intervening on Reproductive Health in Young Adult Leukemia and Lymphoma Survivors (Ancillary Study)	Su/University of California at San Diego	Chronic Disease	07.25.17	Approved	Pending
07.28.17	Improving Delivery of Genetic Services to High Risk Childhood Cancer Survivors: A Randomized Study (Ancillary Study)	Henderson/University of Chicago	Genetics	08.11.17	Approved	Pending
12.15.17	Prevalence and Predictors of Frailty in Childhood Cancer Survivors and Siblings	Hayek/SJCRH	Chronic Disease Epi/Biostats; Psychology	01.03.18	Approved	Approved
08.19.18	Symptom Assessment and Management Using mHealth for Childhood Cancer Survivors (Ancillary Study)	Huang/SJCRH		08.30.18	Approved	Pending

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<b>Cancer Control and Intervention (Continued)</b>						
08.19.18	Colorectal Cancer Screening Intervention in Childhood Cancer Survivors (Ancillary Study)	Henderson/University of Chicago	Chronic Disease	08.30.18	Approved	Pending
11.04.18	Internet-delivered Cognitive Behavioral Pain Management for Pediatric Cancer Survivors with Chronic Pain: RCT (Ancillary Study)	Alberts/SJCRH	Psychology	12.19.18	Approved	Pending
11.04.18	Cardiovascular Autonomic Dysfunction as a Late Treatment Effect in Survivors of Childhood Cancer (Ancillary Study)	Groarke/Brigham and Women's Hospital	Chronic Disease Epi/Biostats	12.19.18	Approved	Pending
01.30.19	Evaluation of Cardiovascular Health Outcomes among Survivors 2 (ECHOS-2)	Ehrhardt/SJCRH	Chronic Disease	02.08.19	Approved	Pending
03.22.19	Screening Predictors for Thyroid Malignancy in Childhood Cancer Survivors	Mostoufi-Moab/CHOP	Chronic Disease SMN	04.10.19	Approved	Pending
04.11.19	Use and Correlates of Carotid Ultrasound in Survivors of Childhood Cancer	Tonorezos/MSKCC	Chronic Disease	04.30.19	Approved	Pending
<b>CHRONIC DISEASE</b>						
05.02.08	Genitourinary Complications in Survivors of Childhood Cancer	Shnorhavorian/FHRC		06.10.08	Approved	Approved
06.05.08	The Risk of Osteoporosis and Fracture among Survivors of Childhood Cancer	Kadan-Lottick/Yale University		06.15.08	Approved	Approved
06.06.08	Cardiovascular Risk Factors and CV Events	Meacham/Emory University	Epi/Biostats	07.16.08	Approved	Approved
06.06.08	Solid Organ Transplantation in 5-year Survivors of Childhood Cancer.	Termuhlen/Nationwide Children's Hospital		07.11.08	Approved	Approved
06.11.08	Infectious Complications in Childhood Cancer Survivors	Perkins/Children's Hospitals & Clinics of Minnesota		07.11.08	Approved	Approved
06.12.08	A Comparison of Mortality and Morbidity in Hodgkin's Survivors of Contemporary Therapy	Castellino/Wake Forest University	SMN	07.11.08	Approved	Pending
06.13.08	Determination of Risk Factors for Stroke Among Survivors of Childhood Hodgkin's Disease - A Case:Control Study	Bowers/U.T. Southwestern Medical Center at Dallas		07.11.08	Approved	Withdrawn

Date Received	Title	Author/ Institution	Secondary Working Group(s)	Date Investigator Notified	AOI Outcome	Concept to Publication Committee
<b>Chronic Disease (Continued)</b>						
07.01.08	Adverse Neurologic Sequelae Are Predictors of Poor Outcome in Survivors of Childhood Central Nervous System Tumors and Leukemia: A Report from the Childhood Cancer Survivor Study	Ulrich/Children's Hospital Boston/Dana-Farber Cancer Center	Psychology	08.11.08	Approved	Withdrawn
09.02.08	Long-term Outcomes in Adult Survivors of Childhood Cancer: A Comparison of Conventional Therapy and Hematopoietic Cell Transplantation (HCT)	Armenian/City of Hope	Psychology Cancer Control Epi/Biostats	09.19.08	Approved	Approved
09.25.08	Fertility of Female Survivors of Acute Lymphoblastic Leukemia	Green/SJCRH		10.14.08	Approved	Approved
11.11.08	Late DVT Risk in Cancer Survivors	Setia/Memorial Sloan Kettering		12.02.08	Approved	Withdrawn
03.11.09	Creation of a Risk Score Algorithm to Predict Individual Risk of Future Serious Cardiovascular Disease	Chow/FHRC	Cancer Control	04.03.09	Approved	Approved
06.11.09	Outcome of Pregnancies Exposed to Cancer Therapy	Mulvihill/U. of Oklahoma	Genetics	07.10.09	Approved	Approved
06.19.09	The Multifactorial Etiology of Obesity among CCSS Participants	Green/SJCRH	Psychology	07.10.09	Approved	Approved
07.14.09	Renal Outcomes	Nottage/SJCRH			Withdrawn due to overlap	_____
09.08.09	Pulmonary Complications in Long-term Survivors of Childhood CNS Tumors with Craniospinal Irradiation	Tein/SJCRH	Psychology	10.06.09	Approved	Approved
11.09.09	Diseases of the Thyroid Gland Associated with Radiation Therapy: A Report from the Childhood Cancer Survivor Study	Viega/NCI	SMN	11.20.09	Approved	Approved
01.29.10	Longitudinal Assessment of Chronic Health Conditions	Armstrong/SJCRH		02.12.10	Approved	Approved
02.26.10	Health and Functional Status of Long Term Adult Medulloblastoma Survivors	King/Wash. U.	Psychology SMN	03.31.10	Approved	Approved

Date Received	Title	Author/ Institution	Secondary Working Group(s)	Date Investigator Notified	AOI Outcome	Concept to Publication Committee
<b>Chronic Disease (Continued)</b>						
03.04.10	Health Status of Older Adult Survivors of Childhood Cancer	Kenney/DFCI	Psychology Epi/Biostats	03.31.10	Approved	Pending
04.20.10	Scoring Alkylating Agent Exposure: Evaluation of the Cyclophosphamide Equivalent Dose Score	Green/SJCRH	SMN Epi/Biostat	5.18.10	Approved	Approved
05.12.10	Evaluation of Long-term Outcomes in Ewing Sarcoma Survivors	Marina/Stanford	SMN	6.17.10	Approved	Approved
06.10.10	Neurologic and Neurosensory Deficits in Long-term Survivors of Childhood Brain Tumors: Occurrence of New Deficits and Effects of Aging in Occurrence as Assessed in 2007 Survey	Wells/Children's National	SMN Psychology	6.25.10	Approved	Approved
06.24.10	Premature Menopause in Survivors of Childhood Cancer	Levine/Columbia		07.06.10	Approved	Approved
11.05.10	Infertility and Use of Fertility Treatments	Barton/Brigham & Women's		11.23.10	Approved	Approved
02.18.11	BMI and Diabetes Mellitus in Survivors of ALL	Tonorezos/MSKCC	Cancer Control	03.16.11	Approved	Not Approved
04.22.11	Changes in BMI Among Adult Survivors of Childhood CNS Tumors	Chang/MD Anderson	Psychology	05.03.11	Approved	Approved
05.23.11	Longitudinal Analysis of Outcomes for Acute Lymphoblastic Leukemia Survivors	Dilley/Northwestern	Cancer Control	05.30.11	On Hold	Withdrawn
05.06.12	Chronic Medical Conditions Among Long-term Survivors of Pediatric Non-Hodgkin Lymphoma	Bluhm/Washington Hospital	Epi/Biostats Psychology		On Hold	Withdrawn
06.07.12	Longitudinal Pulmonary Complications in Survivors of Childhood Cancer	Dietz/UCSD	Epi/Biostats	07.16.12	Approved	Approved
06.07.12	Using the Cumulative Illness Rating Scale to Characterize The Burden of Chronic Conditions Among Childhood Cancer Survivors	Esbenshade/SJCRH	Epi/Biostats	07.16.12	Approved	Approved
06.07.12	Increasing Risk of Chronic Endocrine Disorders in Aging Survivors of Childhood Cancer	Mostoufi-Moab/ CHOP		07.16.12	Approved	Approved
06.15.12	Medical and Psychosocial Outcomes of Survivors of AYA Cancer	Suh/U. of Chicago	Cancer Control Psychology	07.16.12	Approved	Approved

Date Received	Title	Author/ Institution	Secondary Working Group(s)	Date Investigator Notified	AOI Outcome	Concept to Publication Committee
<b>Chronic Disease (Continued)</b>						
06.16.12	Morbidity and Mortality Associated with the Diagnosis of Subsequent Meningiomas – Is it Necessary to Screen Adult Survivors of Childhood Cancer for Meningiomas?	Bowers/UT Southwestern	SMN	07.16.12	Approved	Approved
08.20.12	Long-term Risk of Small Bowel Obstruction in Pediatric Patients with Primary Abdominal Tumors	Diller/Harvard	Epi/Biostats	08.28.12	Approved	Approved
05.31.13	Changes in Long-Term Outcomes in Hodgkin Lymphoma Survivors with Contemporary Risk-Adapted Therapy	Oeffinger/MSKCC	Epi/Biostats SMN Cancer Control	07.23.13	Approved	Approved
06.10.13	Effects of Body Mass Index on Aging Childhood Cancer Survivors	Effinger/Stanford	Cancer Control	07.23.13	Not Approved	_____
07.31.13	Predictors of Hypertension in Adult Survivors of Childhood Cancer	Ojha/SJCRH	Psychology Epi/Biostats	08.19.13	Approved	Withdrawn
09.27.13	Anthracycline Equivalence	Feijen/Emma Children's	Epi/Biostats	10.14.13	Approved	Approved
09.27.13	Fertility following Contemporary Chemotherapy	Chow/ Univ. of Washington		10.14.13	Approved	Approved
11.07.13	Estimating the Burden of Disease Associated With Late-Effects Among Childhood Cancer Survivors	Yeh/Harvard		12.05.13	Approved	Approved
11.16.13	Updated Prevalence of Long-Term Survivors of Childhood Cancer and Estimated Burden of Morbidity Using SEER and CCSS	Phillips/NCI	Psychology	12.05.13	Approved	Approved
12.11.13	Analysis of Dose Response For Circulatory Disease in the Childhood Cancer Survivor Study Cohort with a Focus on Non-Cardiac Doses	Little/NCI	Epi/Biostats	01.16.14	Approved	Withdrawn
09.02.14	Chronic Health Conditions in Survivors Treated with Abdominal Radiation	Friedman/MSKCC	SMN	09.21.14	Approved	Approved
10.16.14	Comparison of Risks of Long-Term Outcomes with the British CCSS	Fidler/University of Birmingham, UK	SMN Epi/Biostats	10.28.14	Approved	Approved
11.11.14	Long-term Cardiovascular Mortality of Childhood Cancer Survivors - Safety and Efficacy of Percutaneous Coronary Interventions (PCI)	Iliescu/MD Anderson	Epi/Biostats	12.01.14	Approved	Pending

Date Received	Title	Author/ Institution	Secondary Working Group(s)	Date Investigator Notified	AOI Outcome	Concept to Publication Committee
<b>Chronic Disease (Continued)</b>						
11.11.14	Esophageal Strictures After Childhood Cancer Therapy: Experience from Three Childhood Cancer Survivor Cohorts	Asdahl/Aarhus University		12.01.14	Approved	Approved
11.25.14	Racial Variations in Renal Function after Nephrectomy for Wilms Tumor	Christison-Legay/Yale		12.23.14	Approved	Pending
12.05.14	BMI in Survivors Diagnosed 1970-99 and Siblings: Prevalence and Risk Factors	Tonorezos/MSKCC		12.23.14	Approved	Pending
12.05.14	Long-term Morbidity in Survivors of CML	Hijiya/Northwestern			Withdrawn	
12.19.14	Improving Assessment and Treatment of Cardiovascular Risk Factors (Ancillary Study)	Chow/Univ. of Washington	Cancer Control	01.15.15	Approved	Pending
01.27.14	Cardiac Outcomes in Long-Term Survivors of Childhood Cancer	Mulrooney/SJCRH	Epi/Biostats	02.22.15	Approved	Approved
01.27.15	Chronic Health Conditions in Survivors of Non-Hodgkin Lymphoma	Ehrhardt/SJCRH	Epi/Biostats	02.22.15	Approved	Approved
05.05.15	Assessment of Hearing Impairment in Long-Term Survivors of Childhood Cancer	Brown/Baylor	Epi/Biostats	05.25.15	Approved	Approved
05.11.15	Analysis of Non-Alcoholic Fatty Liver Disease as a Modifier of Cardiovascular Disease Risk	Raghunathan/MSKCC	Epi/Biostats	06.18.15	Approved	Pending
06.09.15	Chronic Medical Conditions and Late Mortality Among Survivors of Pediatric Bone Sarcomas	Daw/MD Anderson	Epi/Biostats	07.06.15	Approved	Pending
06.11.15	Incidence of Chronic Disease Among Survivors by Treatment Era and Temporal Trends in Treatment Exposure	Gibson/SJCRH	Epi/Biostats	08.12.15	Approved	Approved
07.21.15	Changes in Long-Term Outcomes in Neuroblastoma Survivors Treated with Contemporary Therapies	Friedman/MSKCC	Cancer Control/SMN	08.12.15	Approved	Approved
08.03.15	Anthracycline Equivalence II	Feijen/Emma Children's /AMC	Epi/Biostats	08.30.15	Approved	Approved
08.04.15	Impact of Childhood Cancer and Treatment on Sperm Quality (Ancillary Study)	Delbes/INRS		08.30.15	Approved	On Hold
08.12.15	Gallbladder Surgery Among Childhood Cancer Survivors	Barnea/MSKCC		08.30.15	Approved	Approved

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<b>Chronic Disease (Continued)</b>						
08.13.15	The Role of Developmental Status in the Dose Response Relationship of Cardiac Radiation and Cardiac Toxicity	Bates/Univ. of Rochester	Epi/Biostats	08.30.15	Approved	Approved
08.21.15	Long-term Incidence of Venous Thromboembolism Among Survivors of Childhood Cancer	Madenci/Boston Children's Hosp.	Epi/Biostats	09.08.15	Approved	Approved
08.21.15	Long-term Incidence of Complications from Surgical Asplenia Among Survivors of Childhood Cancer	Weil/Boston Children's Hosp.	Epi/Biostats SMN	09.08.15	Approved	Approved
08.26.15	Dietary Intake and Risk of Subsequent Cardiometabolic Complications in Survivors of Childhood Acute Lymphoblastic Leukemia	Marcil/Sainte-Justine Univ. Health Center	Epi/Biostats	09.15.15	Approved	On Hold
08.31.15	Long-term Morbidity in Survivors of Childhood CML	Williams/Lurie Children's - Northwestern	Epi/Biostats Psych SMN	09.15.15	Approved	Pending
09.09.15	Medulloblastoma and Primitive Neuroectodermal Tumor (PNET) Outcomes Across Three Decades of Diagnosis	Salloum/Cincinnati Children's Hospital	Epi/Biostats Psych SMN	09.21.15	Approved	Approved
09.10.15	Mortality and Morbidity in Childhood Cancer Survivors: Comparing Results from the CCSS and a Nationwide Cohort in Taiwan	Yu/Taipei Cancer Center	Epi/Biostats SMN	09.21.15	Approved	Pending
09.16.15	Incidence of Late Anorectal Complications among Childhood Cancer Survivors	Weldon/Boston Children's	Epi/Biostats	09.28.15	Approved	Approved
10.14.15	Comprehensive Comparative Analysis of Chronic Health Conditions, Health Status, Social Outcomes, and Mortality in Patients with Rhabdomyosarcoma by Treatment Era	Hingorani/Phoenix Children's Hospital	Cancer Control Epi/Biostats	11.30.15	Approved	Approved
12.08.15	Developing a Microsimulation Model of the Lifetime Clinical Course of Childhood Cancer	Yeh/Harvard School of Public Health	Genetics Epi/Biostats	01.20.16	Approved	Approved
04.08.16	Statin Therapy and Cardiovascular Disease Incidence in Childhood Cancer Survivors	Raghunathan/MSKCC	Epi/Biostats	04.22.16	Approved	Pending
04.09.16	Long-term Fertility Outcomes Following Ovarian Transposition	Glick/Cohen's Children Med Center	Epi/Biostats	04.22.16	Not Approved	_____



Date Received	Title	Author/ Institution	Secondary Working Group(s)	Date Investigator Notified	AOI Outcome	Concept to Publication Committee
<b>Chronic Disease (Continued)</b>						
05.03.16	Cardiometabolic Outcomes Among Survivors of Childhood and Young Adult Cancer	Tonorezos/MSKCC	Cancer Control	05.16.16	Approved	Withdrawn
05.23.16	Health Related Outcomes After Chronic Myeloid Leukemia (comparison with contemporary treatment in COG cohort)(Ancillary Study)	Roth/Children's Hospital at Montefiore	SMN Psychology	06.10.16	Approved	Pending
07.25.16	Reproductive Outcomes for Survivors of Childhood Cancer (Ancillary Study)	Woodruff/Northwestern	Epi/Biostats	08.24.16	Approved	Pending
08.24.16	Infertility, Assisted Reproductive Technology Utilization and Pregnancy Outcomes: A CCSS and SART CORS data linkage study	Keefe/Brigham and Women's Hospital	Epi/Biostats	09.06.16	Approved	Approved
02.07.17	The Impact of Thyroid Hormone Replacement Therapy on the Cardiovascular Health Burden in Childhood Cancer Survivors	Kero/Turku University Hospital	Epi/Biostats	02.09.17	Not Approved	_____
06.15.17	Impact of Modifiable Lifestyle Behaviors on Risk of Serious Chronic Conditions and Evaluation of Interactions with Treatment Exposures	Gibson/SJCRH	Epi/Biostats	07.31.17	Approved	Pending
07.04.17	Outcomes Across Three Decades of Diagnosis for Bone Tumors	Prasad/LSU	SMN Cancer Control Epi/Biostats	08.11.17	On Hold	
07.24.17	Changes in the Risk and Outcomes of Stroke in Survivors with Changing Treatment Protocols	Sun/Johns Hopkins	Psychology	08.11.17	Approved	Pending
09.04.17	Prevalence and Risk of Frailty in Survivors of Childhood Cancer (Ancillary Study)	Gibson/SJCRH	Psychology	09.20.17	Approved	Withdrawn
09.15.17	Long-Term Outcomes among Survivors of Childhood Ewing Sarcoma	Weldon/Boston Children's	SMN Epi/Biostats	09.29.17	Approved	Pending
09.28.17	Risk Factors for Overweight and Obesity in U.S. and Swiss ALL survivors: A CCSS and SCCSS study	Kuehni/University of Bern	Epi/Biostats Psychology	10.13.17	Approved	Pending
10.19.17	Impact of Chronic Health Conditions on Sexual Dysfunction in Female Childhood Cancer Survivors	Bjornard/SJCRH	Psychology	11.01.17	Approved	Approved

Date Received	Title	Author/ Institution	Secondary Working Group(s)	Date Investigator Notified	AOI Outcome	Concept to Publication Committee
<b>Chronic Disease (Continued)</b>						
11.08.17	Changes in Long-term Outcomes among Survivors of Childhood Acute Lymphoblastic Leukemia	Dixon/SJCRH	SMN, Epi/Biostats Cancer Control Psychology	11.21.17	Approved	Approved
11.20.17	Outcomes in Survivors of Astrocytoma and Ependymoma Across Three Decades of Diagnosis and Treatment	Lange/MSKCC De Blank/CCHMC	SMN, Epi/Biostats Cancer Control Psychology	12.15.17	Approved	Approved
11.21.17	Exercise and Preventive Chronic Health Conditions and Health Care Utilization	Jones/MSKCC	Cancer Control SMN	12.15.17	Approved	Approved
01.03.18	Long-term Outcomes of Pelvic Sarcoma Based on Initial Treatment	Madenci/Boston Children's	SMN Epi/Biostats	01.17.18	Approved	Pending
01.04.18	Risk of Adverse Cardiometabolic Outcomes in Survivors Treated with Total Body Irradiation (Ancillary Study)	Friedman/MSKCC		01.17.18	Approved	Pending
01.29.18	Impact of Treatment Era on Long-Term Health Outcomes in Wilms Tumor Survivors	Weil/Boston Children's	SMN, Psychology Epi/Biostats	02.12.18	Approved	Approved
02.12.18	Long-term Renal Complications in Survivors of Childhood Cancer: CCSS and ALICCS	Dieffenbach/Boston Children's	Epi/Biostats	03.06.18	Approved	Approved
03.07.18	Polypharmacy and Patterns of Prescription Medication Use among Childhood Cancer Survivors	Murphy/UT Southwestern	Cancer Control Psychology	03.23.18	Approved	Pending
04.10.18	Long-Term Outcomes among Survivors of Childhood Acute Myeloid Leukemia	Turcotte/U of Minn	SMN Epi/Biostats	04.24.18	Approved	Approved
06.12.18	Burden of Late Surgery in Survivors of Childhood Cancer	Dieffenbach/Boston Children's	Epi/Biostats	07.23.18	Approved	Approved
07.23.18	Patterns in Motor and Sensory Neuropathy and Associated Outcomes in Long Term Survivors of Childhood Cancer	Rodwin/Yale New Haven Hospital	Cancer Control Psychology	08.06.18	Approved	Approved
08.21.18	Incidence and Risk Factors for Cesarean Delivery in Female Survivors of Childhood Cancer	Dieffenbach/Boston Children's	Epi/Biostats		Withdrawn	
08.21.18	Influence of Radiotherapy Dose to Cardiac Substructures on Cardiac Risk in Long-Term Survivors of Childhood Cancer	Bates/University of Florida	Epi/Biostats	08.31.18	Approved	Pending

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<b>Chronic Disease (Continued)</b>						
09.24.18	Impact of ACEi and Beta Blocker Use on Cardiovascular Disease in Survivors of Childhood Cancer	Bottinor/Vanderbilt University	Epi/Biostats	09.29.18	Approved	Pending
03.21.19	Rate of and Risk Factors for Secondary Amputation after Primary Limb Salvage Surgery to Treat Pediatric Sarcoma	Geiger/UCSF	Epi/Biostats	04.10.19	Approved	Pending
04.11.19	Disparities in Cardiovascular Outcomes among Childhood Cancer Survivors	Noyd/Duke University	Cancer Control Epi/Biostats	04.30.19	Approved	Pending
<b>EPIDEMIOLOGY / BIOSTATISTICS</b>						
04.21.08	Conditional Survival in Pediatric and Adolescent Malignancies	Wasilewski-Masker/Emory/CHOA		06.10.08	Approved	Approved
04.21.08	Analysis of Late Mortality by Treatment Era: Brief Report	Armstrong/SJCRH		06.10.08	Approved	Not Approved
06.19.08	Cardiac Mortality	Armstrong/SJCRH		07.16.08	Approved	Approved
09.23.08	Assessing Bias Associated with Missing Data from the Childhood Cancer Survivor Study	Huang/SJCRH		10.14.08	Approved	Withdrawn
02.12.09	Predicting Late Effects of Individual Cancer Survivors: A Pilot Methodological Study (Ancillary Study)	Yasui/Edmonton Alberta		03.16.09	Approved	Approved
05.12.09	Impact of Health Behaviors and Health Perceptions on Subsequent Mortality in Childhood Cancer Survivors (Ancillary Study)	Cox/SJCRH		05.28.09	Approved	Approved
05.26.09	Cost Effectiveness of Cardiac Guideline for Survivors of Pediatric Cancers	Wong/City of Hope		06.10.09	Approved	Approved
10.07.09	Computational Dose Reconstruction for Breast Cancer Patients after Hodgkin Lymphoma: Dose Comparison and Sensitivity Study	Lee/NCI	SMN	11.05.09	Not Approved	—
11.16.09	Congenital Heart Disease	Gruber/U. of Michigan	Genetics	12.22.09	Approved	Not Approved
11.19.10	Exercise and Prevention of Late Cardiac Outcomes After Anthracyclines	Ryerson/Emory	Chronic Disease Cancer Control	12.10.10	Approved	Approved

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<b>Epidemiology/Biostatistics (Continued)</b>						
06.18.10	Long-term Outcomes in Survivors of Retinoblastoma (The New York Cohort): A Comparison of Survivors Versus Non-Cancer Controls	Dunkel/MSKCC		07.01.10	Approved	Approved
10.27.10	Prediction of Risk of Serious Health Conditions	Salz/MSKCC		11.10.10	Approved	Withdrawn
05.16.11	Cost Effectiveness of COG Breast Cancer Screening Guidelines for Female Survivors of Pediatric Cancers	Wong/City of Hope	SMN Cancer Control	06.02.11	Approved	Approved
06.13.11	Predictors of Healthy Aging	Ness/SJCRH	SMN/ Chronic Disease Genetics Psychology Cancer Control	07.13.11	Approved	Pending
09.08.11	Statistical Analysis of a Mixture of Recurrent Event and Panel Count data	Zhu/SJCRH		09.23.11	Approved	Approved
10.06.11	Estimating Long-Term Risks in Children Newly Diagnosed With ALL Based on Survivor Clusters in the CCSS Cohort	Essig/University of Bern	Cancer Control Chronic Disease SMN	11.07.11	Approved	Approved
05.15.12	Predicting the Risk of SMN Among Childhood Cancer Survivors With NMSC as a Second Malignancy	Ojha/SJCRH	SMN	06.13.12	Withdrawn	—
07.16.12	Access to Health Information Technology and Health Information Seeking in Adult Survivors of Childhood Cancer	Mertens/SJCRH	Cancer Control	08.28.12	Approved	Approved
12.12.12	Estimation of Risk Ratios in the Presence of Statistical Interactions	Satagopan/MSKCC		01.10.13	Approved	Approved
01.14.14	Risk of Cardiovascular Disease and Second Malignancies Attributable to Therapeutic Exposures by Treatment Era	Bhatia/UAB	SMN/Chronic Disease	02.11.14	Approved	Withdrawn
01.14.14	Association Between Key Therapeutic Exposures And Outcomes - Gaps in Knowledge	Bhatia/UAB	SMN/Chronic Disease	02.11.14	Approved	Withdrawn
01.20.14	Late Mortality by Treatment Era	Armstrong/SJCRH		02.11.14	Approved	Approved

Date Received	Title	Author/ Institution	Secondary Working Group(s)	Date Investigator Notified	AOI Outcome	Concept to Publication Committee
<b>Epidemiology/Biostatistics (Continued)</b>						
04.02.14	Differences in Participant Characteristics and Changes in Treatment Characteristics from the Original to the Expanded Cohorts	Mertens/Emory		04.23.14	Approved	Approved
04.05.14	Tiled Study Design: Using Temporal Overlap as a Method to Extend Longitudinal Follow-Up Among Carefully Selected Time-Limited Cohorts	Chow/University of Washington	Chronic Disease	04.23.14	Approved	Approved
05.19.14	Use of an Incentive to Increase Biologic Sample (Oragene) Return Rate	McDonald/SJCRH		06.20.14	Approved	Approved
08.15.14	Differences in Long-Term Outcomes by Race/Ethnicity in Childhood Cancer Survivors	Liu/University of Alberta		09.04.14	Approved	Approved
11.11.14	Relationships of Persistent Symptoms with Relapse, SMN, and Mortality	Huang/SJCRH	SMN, Chronic Disease, Psychology	12.01.14	Approved	Withdrawn
04.02.15	Dosimetric Uncertainty in Radiation Dose Reconstruction Method used for CCSS	Howell/MD Anderson		04.26.15	Approved	Approved
05.29.15	Clinical Utilities of Various Prediction Performance Measures	Yuan/University of Alberta		06.18.15	Approved	Approved
07.17.15	Burden of Morbidity after Basal Cell Carcinoma	Bhatia/UAB	Chronic Disease, Genetics, SMN	08.12.15	Approved	Withdrawn
10.04.15	Statistical Analysis for Various Outcome Measures in Recurrent Event Studies - Ancillary	Zhu/SJCRH		10.15.15	Approved	Approved
01.19.16	Individual Prediction of Premature Ovarian Insufficiency (Ancillary Study)	Yuan/University of Alberta		02.05.16	Approved	Approved
10.06.16	Trends in Life Expectancy and Quality-Adjusted Life Expectancy among Childhood Cancer Survivors	Yeh/Boston Children's Hospital	Chronic Disease Psychology	10.28.16	Approved	Approved
10.18.16	Cost-effective Cardiomyopathy Surveillance Strategies in Childhood Cancer Survivors	Ehrhardt/SJCRH	Chronic Disease Cancer Control	11.14.16	Approved	Approved
01.05.17	Statistical Methods for GWAS Analysis of Recurrent-event Data in Cancer Study	Zhu/University of Texas Health Science Center	Genetics	01.23.17	Approved	Pending
06.28.17	A Personalized Cumulative Burden Prediction Tool for Second Neoplasms	Bhakta/SJCRH	SMN	07.31.17	Approved	Pending
11.30.17	Personalized Medicine Approach to Define the Association between Exercise and Cardiovascular Risk Profile	Scott/MSKCC	Chronic Disease Cancer Control		On Hold	

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<b>Epidemiology/Biostatistics (Continued)</b>						
10.12.18	Effect of Hypothetical Lifestyle Interventions on Major Cardiovascular Events among Childhood Cancer Survivors	Madenci/Harvard University	Cancer Control Chronic Disease	11.07.18	Approved	Pending
12.19.18	Statistical Analysis for Genome-Wide Data with Interval-censored Outcomes in Oral Health Studies	Zhu/ University of Texas Health Science Center	Chronic Disease	01.04.19	Approved	Pending
01.15.19	Estimating the Global Burden of Childhood Cancer in the Global Burden of Disease 2019 Study	Force/SJCRH	Chronic Disease Psychology	01.25.19	Approved	Pending
01.16.19	Factors Contributing to Survival Following Second Malignant Neoplasms Diagnosed in Long-term Survivors of Childhood Cancer	Brown/Baylor College of Medicine	SMN, Chronic Disease Psychology, Cancer Control	01.25.19	Approved	Pending
04.29.19	Neighborhood Effect and Chronic Conditions in the CCSS Cohort	Howell/SJCRH	Chronic Disease	05.10.19	Approved	Pending
04.29.19	Socioeconomic and Rural/Urban Differences in Adverse Outcomes among Childhood Cancer Survivors	Winestone/UCSF		05.10.19	Approved	Pending
<b>GENETICS</b>						
-	GWAS of SMNs after Hodgkin Lymphoma	Onel/U. of Chicago	SMN	-	Approved	Approved
-	Genetic Epidemiology of Basal Cell Carcinoma in Childhood Cancer Survivors	Davies/Cincinnati	SMN	-	Approved	Approved
-	Susceptibility Genes for RT-induced Breast Cancer after Hodgkin Lymphoma	Van Leeuwen/Netherlands Cancer Institute	SMN		Approved	Approved
-	Radiation-related Thyroid Cancer	Nikiforov/U. of Pittsburgh	SMN		Approved	Approved
05.02.08	Characterization of Genomic Alterations in Radiation-Related Breast Cancer Using Array CGH (Comparative Genomic Hybridization)	Yang/NCI	SMN	06.02.08	Approved	Approved
05.27.08	Incidence of Familial Hodgkin Lymphoma	Metzger/SJCRH		06.10.08	Approved	Hold
06.05.08	Genetic Predictors of Impaired and Enhanced Neurocognitive and Psychological Functioning among Survivors of Childhood Leukemia and Lymphoma	Kadan-Lottick/Yale University	Psychology	03.16.09	Approved	Pending

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<b>Genetics (Continued)</b>						
06.25.08	Genetic Polymorphisms and Metabolic Outcomes in Childhood Leukemia Survivors (Ancillary Study)	Kamdar/Texas Children's Hospital	Chronic Disease	08.11.08	Approved	—
09.25.08	Late Effects in Childhood Cancer Survivors and Vitamin D Polymorphisms	Ocku/Baylor	SMN	10.14.08	Approved	Not Approved
11.13.08	Long-Term Morbidity in Childhood Cancer Survivors with Down Syndrome	Raber/UCSF	Chronic Disease	12.02.08	Approved	Approved
12.02.08	Evaluation of SNPs in the EWS Breakpoint Region in People with and without Ewing Sarcoma (Ancillary Study)	DuBois/UCSF		12.18.08	Approved	Approved
06.15.09	Telomere Length and Risk for Second Malignancy in Pediatric Cancer Survivors	Gramatges/Baylor	SMN	07.10.09	Approved	Approved
10.15.09	Polymorphisms of Cardiomyocyte Genes in CCSS Participants with Congestive Heart Failure or Subclinical Left Ventricular Dysfunction After Treatment with Anthracyclines	Green/SJCRH		11.05.09	Approved	Withdrawn
07.28.10	Detecting Germ Cell Mutation by Family DNA Sequencing	Mulvihill/OU				Withdrawn
08.21.10	Genetic Alterations in Second Malignant Neoplasms	Nakamura/UCSF	SMN	11.10.10	Approved	Approved
12.15.10	Multiple SMNs & Genomic Instability/DNA Repair	Bhatia/UAB	Epi/Biostats SMN	02.03.11	Approved	Pending
02.09.11	Molecular Variation Between Spontaneous Breast Cancers and Breast Cancers Induced by Radiation in Survivors of Hodgkin's Lymphoma	Pelloski/Ohio State	SMN	03.09.11	Approved	Withdrawn
04.04.11	Genome-Wide Association Study of Subsequent Malignancies	Morton/NCI	SMN Epi/B iostats	04.21.11	Approved	Approved
04.14.11	Identification of Susceptibility Loci in Radiation-Induced Breast Cancer by Exome and CNV Analysis	Hodgson/Princess Margaret Hospital	SMN	05.03.11	Approved	Withdrawn

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<b>Genetics (Continued)</b>						
05.03.11	Genetic Susceptibility to Anthracycline-Related CHF	Bhatia/UAB	Chronic Disease Epi/Biostats	06.02.11	Approved	Approved
07.08.11	Genetic Susceptibilities to Second Cancers	Onel/University of Chicago	SMN	08.16.11	Approved	Pending
07.08.11	PRDM1 and Somatic Mutations in SMNs after Hodgkin Lymphoma	Onel/University of Chicago	SMN	08.16.11	Approved	Pending
10.05.11	Host and Demographic Factors Associated with Solid Second Malignant Neoplasms in Un-Irradiated Childhood Cancer Survivors	Henderson/University of Chicago	SMN	11.07.11	Withdrawn	_____
10.18.12	Epigenomic Profiling of Metabolic Outcomes in Childhood Leukemia Survivors	Lupo/Baylor	Cancer Control	11.20.12	Approved	Approved
09.26.13	Evaluation of the Intrinsic Molecular Profiles of Radiation-Preceded Breast Cancer	Barcellos-Hoff/NYU	SMN	10.14.13	Approved	Pending
03.25.14	Shortened Telomere Length and Defects in Telomere Maintenance Associated with Thyroid SMNs in Childhood Cancer Survivors (Ancillary Study)	Gramatges/Baylor	SMN, Epi/Biostats	04.14.14	Approved	_____
04.01.14	Neurofibromatosis and Second Neoplasms (Ancillary Study)	Bhatia/UAB		04.11.14	Approved	Approved
06.20.14	Improving Delivery of Genetic Services to High Risk Childhood Cancer Survivors (Ancillary Study)	Henderson/ University of Chicago	Cancer Control	10.28.14	Approved	Withdrawn
02.19.15	Exome Sequencing to Discover Genetic Variants that Predispose to the Development of Subsequent Neoplasms	Morton/NCI	SMN, Epi/Biostats	04.26.15	Approved	Approved
05.01.15	Validation of Interactome-based Biomarkers of Inherited Suseptibility to Radiation Induced Carcinogenesis (Ancillary Study)	Amundson/Columbia University	SMN	05.11.15	Approved	Withdrawn
01.25.16	Predicting Pulmonary Late Effects in Childhood Cancer Survivors	Agrusa/Baylor College of Medicine	Chronic Disease Epi/Biostats	02.08.16	Withdrawn	_____
03.14.16	Molecular Characterization of Therapy-Related Pediatric High Grade Gliomas	Lucas/SJCRH	SMN	03.28.16	Approved	Pending



Date Received	Title	Author/ Institution	Secondary Working Group(s)	Date Investigator Notified	AOI Outcome	Concept to Publication Committee
<b>Genetics (Continued)</b>						
07.11.16	Late Effects Prediction Using Clinical Phenotypes and Whole Genome Sequencing	Yasui/SJCRH	Chronic Disease SMN Epi/Biostats	07.26.16	Approved	Pending
04.21.17	Germline Genomics to Identify Genetic Variants that Predispose Childhood Cancer Survivors Diagnosed During 1987-1999 to the Development of Subsequent Neoplasms	Morton/NCI	SMN Epi/Biostats	05.09.17	Approved	—
05.24.17	Biological Mechanisms of Accelerated Aging Evidenced as Frailty in Survivors of Childhood Leukemia	Gramatges/Baylor	Chronic Disease	06.07.17	Approved	Pending
06.01.17	Myocardial Infarction GWAS (via GWAS RFP process)	Morrison/Univ. Texas Health Science Center	Chronic Disease Epi/Biostats	06.12.17	Approved	Approved
06.01.17	Stroke GWAS (via GWAS RFP process)	Morrison and Bowers/UTHSC and UT Southwestern	Chronic Disease Epi/Biostats	06.12.17	Approved	Approved
06.01.17	Diabetes GWAS (via GWAS RFP process)	Lupo/Baylor College of Medicine	Chronic Disease	06.12.17	Approved	Approved
06.01.17	GWAS of Thyroid Nodules and Intestinal Polyps	Shultz/Children's Hospital of Minnesota	Chronic Disease	06.12.17	Approved	Pending
06.01.17	Cardiomyopathy Simulation Model Utilizing GWAS Data (via GWAS RFP Process)	Yeh/ Boston Children's; Harvard	Chronic Disease	06.12.17	Approved	Pending
06.03.17	Late Effects Prediction Using Whole Genome Sequencing (Expansion Data)	Yasui/SJCRH	Epi/Biostats SMN; Chronic Disease; Psychology	07.25.17	Approved	Pending
08.08.17	Immune Dysregulation and Premature Aging in Childhood Cancer Survivors (Ancillary Study)	Cozen/USC	Chronic Disease Psychology	09.01.17	Approved	Pending
10.01.17	Tinnitus GWAS (via GWAS RFP Process)	Dolan/ University of Chicago	Chronic Disease	10.16.17	Approved	Approved
10.01.17	Intestinal Obstruction GWAS (via GWAS RFP Process)	Madenci/Boston Children's Hospital	Chronic Disease	11.12.17	Approved	Approved

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<b>Genetics (Continued)</b>						
10.01.17	Genetic Susceptibility to Anthracycline-Related Congestive Heart Failure (via GWAS RFP Process)	Bhatia/UAB	Chronic Disease	10.16.17	Approved	Approved
02.01.18	iPSC-Cardiomyocyte and RNAseq Identified Genes and Cardiomyopathy (via GWAS RFP Process)	Reyes/MD Anderson	Chronic Disease	02.23.17	Approved	Approved
09.18.18	Genetic Risk Prediction Profiles for Fracture among Childhood Cancer Survivors	Im/University of Alberta	Chronic Disease Epi/Biostats	09.29.18	Approved	Approved
09.24.18	Developing a Clinical and Genetic Risk Prediction Model for Diabetes Mellitus among Survivors of Childhood Cancer	Lupo/Baylor College of Medicine	Chronic Disease Epi/Biostats	09.29.18	Approved	Pending
09.26.18	Genome Wide Association Study of Modulators of Pregnancy in Long Term Survivors of Pediatric Cancer	Rotz/Cleveland Clinic	Chronic Disease	10.25.18	Approved	Approved
09.28.18	Genetic Susceptibility to Neurocognitive Impairment Secondary to Childhood Cancer Treatment	Scheurer/Baylor College of Medicine	Psychology	10.25.18	Approved	Approved
01.08.19	Genetic Determinants of Posttraumatic Stress Disorder in Pediatric Cancer Survivors	Recklitis/Dana Farber Cancer Instit	Psychology (Co-Primary) Epi/Biostats	01.18.19	Approved	Pending
01.15.19	GWAS of Cisplatin Induced and Non-Cisplatin Induced Hearing Loss	Dolan/University of Chicago	Epi/Biostats	01.25.19	Approved	Pending
01.30.19	GWAS of Hypertension in Childhood Cancer Survivors	Pierzynski/SJCRH	Chronic Disease Epi/Biostats	02.08.19	Approved	Approved
03.07.19	Genetic Susceptibility to Certain Subsequent Neoplasms after Radiotherapy for Childhood Cancer	Morton/NCI	SMN	03.22.19	Approved	Pending
03.28.19	Whole-Genome Sequencing Analysis of Germline Mutations in DNA Repair Genes	Wang/SJCRH	SMN Epi/Biostats	04.10.19	Approved	Pending
05.02.19	A Genome-Wide Association Study for Frailty in Adult Survivors of Childhood Cancer	Gramatges/Baylor College of Medicine	Chronic Disease Epi/Biostats	05.13.19	Approved	Pending

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<b>PSYCHOLOGY</b>						
05.05.08	Psychosexual Adjustment in Long-Term Female Survivors of Childhood Cancer	Carpentier/Indiana University School of Medicine			Withdrawn	_____
06.05.08	Predictors of Future QOL in Adolescent Survivors of Childhood Cancer	Nolan/SJCRH	Chronic Disease	07.11.08	Approved	Approved
06.07.08	Quality of Life Associated with Fertility Status in Childhood Cancer Survivors	Warwick/Medical College of Wisconsin	Chronic Disease	07.11.08	Withdrawn	_____
06.09.08	QOL in Long-Term Survivors	Schapmire/University of Louisville		07.11.08	Withdrawn	_____
06.11.08	Health Behaviors and Chronic Disease	Hudson/SJCRH			Withdrawn	_____
07.10.08	The Psychological and General Health Status Impact of Late Sibling Death: A Report from the Childhood Cancer Survivor Study	Raber/UCSF Children's Hospital		08.11.08	Withdrawn	_____
08.25.08	Impact of Chronic Disease on Neurocognitive and Psychosocial Functions	Krull/ SJCRH	Chronic Disease	09.19.08	Approved	Approved
10.10.08	An Examination of the Relationship Between Fatigue/Sleep Disturbance and Neurocognitive Functioning in Adult Survivors of Childhood Cancer	Clanton/Baylor		11.12.08	Approved	Approved
11.24.08	Outcome after Stroke among Long-Term Survivors of Childhood Leukemia and Brain Tumors	Fullerton/UCSF	Chronic Disease	12.18.08	Approved	Approved
01.26.09	Localization of CNS Directed Radiotherapy and Neurocognitive, Psychological and Quality of Life Outcomes in Survivors of CNS Tumors	Armstrong/SJCRH		02.12.09	Approved	Approved
01.27.09	Chronic Pain and Psychosexual Function in Adult Survivors of Childhood Cancer	Randolph-Frye/SJCRH		02.12.09	Withdrawn	_____
05.05.09	Dermatological Issues in Adult Survivors of Childhood Cancer	Kinahan/Northwestern	Cancer Control	05.28.09	Approved	Approved
06.16.09	Predictors of Psychoactive Medication Use	Brinkman/SJCRH	Epi/Biostats	07.10.09	Approved	Approved
08.12.09	Causal Associations Between Psychological and Quality of Life Outcomes in CCSS	Krull/SJCRH		09.09.09	Approved	Withdrawn

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<b>Psychology (Continued)</b>						
08.15.09	Health Related Quality of Life in Adult Survivors of Relapsed ALL	Essig/University of Bern		09.09.09	Withdrawn	—
01.18.10	Psychological and Neurocognitive Outcomes in Those Diagnosed with Cancer as Adolescent and Young Adults in the CCSS	Prasad/Vanderbilt		02.12.10	Approved	Approved
09.29.10	Longitudinal Patterns of Late Effects in Adult Survivors of Childhood Brain Tumors	Hardie/Drexel	Epi/Biostats Chronic Disease	10.21.10	Approved	Approved
10.21.10	Longitudinal Psychological Distress	Brinkman/SJCRH		11.10.10	Approved	Approved
04.22.11	Sensory-motor Problems and Associated Functional Outcomes in Survivors of Childhood Central Nervous System (CNS) Tumors	Walsh/ Children's National Medical Center	Chronic Disease	05.03.11	Approved	Withdrawn
06.23.11	Physical Activity and Risky Behavior Patterns Among Teenage Survivors of Childhood Cancers	Devine/U. of Rochester	Cancer Control	07.13.11	Approved	Approved
07.23.11	Measurement Invariance In Health-Related Quality of Life Between Young Adult Survivors of Childhood Cancer and Their Siblings	Huang/ University of Florida	Epi/Biostats	08.16.11	Approved	Approved
01.19.12	Post-traumatic Stress Symptoms, Adherence to Screening Guidelines and Health-Related Behaviors in Adult Survivors of Childhood Cancer	Kimberg/SJCRH	Cancer Control		Withdrawn	Withdrawn
01.19.12	Health Related Locus of Control	Kimberg/SJCRH	Cancer Control	02.02.11	Approved	Approved
03.27.12	Chronic Alcohol Consumption and Neurocognitive Function in Adult Survivors of Childhood Cancer	Brinkman/SJCRH	Cancer Control	04.26.12	Approved	Approved
04.25.12	Psychosocial and Physical Factors Influencing Fatigue in Survivors of Childhood Hodgkin Lymphoma	Crabtree/SJCRH	Epi/Biostats	05.15.12	Approved	Approved
05.07.12	Identifying Longitudinal Predictors of Quality of Life in Adolescent Survivors of Pediatric Cancer	Stern/VCU		06.13.12	Approved	Approved
05.08.12	Fatigue Reported by Childhood Cancer Survivors and Its Relationship to Health Outcomes	Lai/Northwestern University	Epi/Biostats	06.13.12	Approved	Withdrawn
10.03.12	Locus of Control and Survivorship Care	Mays/Georgetown		11.20.12	Approved	Withdrawn
10.06.12	Psychosocial Outcomes of Pediatric Cancer Survivors	Nellen/University of Virginia		10.26.12	Withdrawn	—

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<b>Psychology (Continued)</b>						
10.12.12	The Impact of Vision Loss Among Childhood Survivors of Central Nervous System Astroglial Tumors	De Blank/Rainbow Babies	Chronic Disease	10.26.12	Approved	Approved
10.16.12	A Pilot Study to Investigate Stimulants to Improve Neurocognitive Impairment in Adult Survivors of Childhood Cancer	Balsamo/Yale		10.26.12	Approved	Withdrawn
10.17.12	Posttraumatic Stress and Growth in Survivors of Recurrent Pediatric Blood Cancers	Hoffman/University of Iowa		10.26.12	Withdrawn	_____
10.24.12	Neurocognitive and Psychosocial Difficulties in Survivors of Rhabdomyosarcomas	Schapiro/Washington University		11.20.12	Approved	Approved
10.29.12	Sleep and Fatigue in Survivors of Pediatric CNS Tumors	Manley/Dana-Farber	Chronic Disease	11.20.12	Approved	Withdrawn
10.30.12	Eating Disorder Behaviors in Survivors of Childhood Cancer	Zhang/Tufts University		11.20.12	Approved	Withdrawn
05.01.13	Social and Behavioral Phenotypes of Adolescent Survivors of Childhood Cancer	Brinkman/SCJRH		05.30.13	Approved	Approved
05.08.13	Exploring Latent Clusters of Survivors Using the BSI-18	D'Agostino/Princess Margaret Cancer Centre		05.30.13	Approved	Approved
08.19.13	Mental Health Care Service Availability and Utilization Among Childhood Cancer Survivors	Perez/Mass General	Cancer Control	09.26.13	Approved	Approved
08.23.13	The Impact of the Sibling Sociodemographic and Health Factors on Psychological Outcomes of Childhood Cancer Survivors	Buchbinder/CHOC		09.26.13	Approved	Withdrawn
11.06.13	Impact of Social Networks on Psychological and Health-Related Quality of Life Outcomes on Young Adult Survivors of Childhood Cancer	Galligan/Univ. of Florida		12.17.13	Withdrawn	_____
11.14.13	Neuropsychological Outcomes in Long Term Survivors of Stem Cell Transplant	Hiniker/Stanford		12.17.13	Not Approved	_____
01.20.14	Cognitive, Behavioral and Learning Problems in Survivors of Childhood ALL	Jacola/SJCRH		02.11.14	Approved	Approved
01.29.14	Adult Neurobehavioral Late Effects of Pediatric Low Grade Brain Tumors	Ris/Baylor	Epi/Biostats	02.11.14	Approved	Approved

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<b>Psychology (Continued)</b>						
03.14.14	Antecedents and Consequences of Personal and Interpersonal Strengths in Young Adult Survivors	Henrich/Georgia State University		03.30.14	Approved	Approved
04.03.14	Vascular Effects of Cranial Radiation Therapy (Ancillary Study)	Mueller/UCSF	Chronic Disease Epi/Biostats	04.22.14	Approved	Withdrawn
06.30.14	Psychological Concerns Among Siblings of Childhood Cancer Survivors	Buchbinder/CHOC		08.29.14	Approved	Approved
10.06.14	Effects of Administration Modes on Patient-Reported Outcomes Assessment in CCSS	Huang/SJCRH	Epi/Biostats	10.28.14	Approved	Approved
03.05.14	Neurocognitive Function in Survivors of Osteosarcoma	Kadan-Lottick/Yale		04.26.15	Approved	Approved
05.25.15	Psychosocial Outcomes in Adolescent Survivors of Wilms Tumor	Foster/St. Louis Children's Hospital	Chronic Disease	06.18.15	Approved	Approved
08.07.15	Prevalence and Predictors of Cognitive and Behavioral Problems in Adolescent Survivors of CNS Tumors	Kunin-Batson/University of Minn.	Chronic Disease	08.30.15	Approved	Pending
08.12.15	Cognitive and Behavioral Outcomes in Adolescent Survivors of Neuroblastoma	Zheng/Yale		08.30.15	Approved	Approved
08.19.15	Social Function in Adolescent Survivors of Pediatric Brain Tumors	Schulte/Alberta Children's Hosp.		09.08.15	Approved	Approved
09.09.15	Loneliness Predictors and Outcomes in Young Adult Childhood Cancer Survivors	Fayad/University at Buffalo	Cancer Control	09.21.15	Approved	Approved
09.09.15	Sleep Behaviors and Patterns and their Relationship to Health and Mental Health Outcomes in Adult Survivors	Daniel/CHOP	Chronic Disease SMN	09.21.15	Approved	Approved
09.11.15	Psychological Distress, Neurologic Morbidity and Functional Independence Among Survivors With CNS-Directed Therapy	Vuotto/SJCRH	Chronic Disease	09.28.15	Approved	Approved
09.15.15	Effect of NF1 Status on Late Outcomes in Adult Survivors of Childhood Cancer	De Blank/University Hospitals Rainbow Babies	Epi/Biostats Chronic Disease SMN	09.28.15	Approved	Approved
11.11.15	Prevalence and Patterns of Prescription Psychoactive Medication Use in Adolescent Survivors of Childhood Cancer	Cheung/SJCRH		11.25.15	Approved	Approved

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<b>Psychology (Continued)</b>						
11.26.15	Longitudinal Patterns of Psychological Distress and Health Behaviors in Adolescents	Shin/UNC Greensboro	Cancer Control	11.30.15	Withdrawn	
12.01.15	Psychological and Behavioral Outcomes in Pediatric AML Survivors: BMT versus Chemotherapy-only	Stefanski/Cincinnati Children's Hospital Medical Center		12.14.15	Approved	Approved
02.10.16	eHealth Intervention for Insomnia in ALL Survivors (Ancillary Study)	Brinkman/SJCRH	Cancer Control/Intervention	02.22.16	Approved	Pending
02.10.16	Adolescent Risk Factors and Behavior Patterns and Future Alcohol and Psychoactive Medication Use in Young Adult Survivors	Ruiz/Harbor-UCLA Medical Center		02.22.16	Approved	Withdrawn
05.05.16	Posttraumatic Stress as a Unique Contributor to Health Outcomes and Healthcare Utilization in Adult Survivors of Childhood Cancer	Van Sickle/Florida Institute of Technology	Cancer Control	05.20.16	Approved	Approved
05.09.16	Special Education Services, Educational Attainment, and Chronic Health Conditions Among Long-Term Survivors	Bashore/Cook Children's Med. Center	Chronic Disease	05.20.16	Approved	Approved
05.16.16	Long Term Psychosocial Outcomes in Pediatric Low Grade Glioma Survivors	Ris/Texas Children's Hospital	Epi/Biostats	06.01.16	Approved	Approved
08.26.16	The Impact of Preexisting Genetic or Congenital Medical Conditions on Long-Term Psychosocial and Psychological Outcomes	Jacola/SJCRH	Chronic Disease Genetics	09.07.16	Approved	Pending
09.30.16	Trends in Utility-based Health-related Quality of Life Among Childhood Cancer Survivors	Yeh/Boston Children's Hospital	Chronic Disease	10.28.16	Approved	Approved
10.27.16	Cognitive Aging in Adult Survivors of Childhood Cancer	Krull/SJCRH	Chronic Disease Epidemiology/Biostatistics Cancer Control	11.15.16	Approved	Pending
11.15.16	Physical Activity as a Predictor of Neurocognitive Outcomes in Adult Survivors of Childhood Cancers	Edelstein/Princess Margaret Cancer Center	Chronic Disease Cancer Control	11.30.16	Approved	Approved
12.21.16	Longitudinal Changes in Functional Independence in Aging Adult Survivors of Pediatric Brain Tumors	Brinkman/SJCRH	Chronic Disease	01.12.17	Approved	Pending

Date Received	Title	Author/ Institution	Secondary Working Group(s)	Date Investigator Notified	AOI Outcome	Concept to Publication Committee
<b>Psychology (Continued)</b>						
01.09.17	Suicide, Homicide and Accidental Causes of Death in Childhood Cancer Survivors	Qaddoumi/SJCRH	Epi/Biostats	01.24.17	Approved	Pending
02.01.17	Determinants of Longitudinal Health-Related Quality of Life Change in Adult Survivors of Childhood Cancer	Huang/SJCRH	Chronic Disease Cancer Control	02.17.17	Approved	Approved
02.17.17	Effects of Radiation and Changes by Treatment Era on Neurocognitive Impairment, Social Attainment and Quality of Life in Adult Survivors of Pediatric Brain Tumors	Brinkman/SJCRH		02.28.17	Approved	Pending
02.28.17	Self-Reported Neuropsychological Outcomes in Adult Survivors of Neuroblastoma	Hesko/Univ. of Chicago	Chronic Disease	04.04.17	Approved	Approved
03.08.17	Daily and Chronic Experiences of Pain in Adult Survivors of Childhood Cancer	Alberts/SJCRH	Cancer Control	04.04.17	Approved	Approved
03.10.17	Racial/Ethnic Differences in Neurocognitive and Psychological Function in Adult Survivors of Childhood Cancers	Dixon/SJCRH	Epi/Biostats	04.04.17	Approved	Approved
07.13.17	Loss of Sight, Hearing and Peripheral Sensation and its Effect on HRQOL and Social Functioning in Childhood Cancer Survivors Across Three Decades of Diagnosis	Prasad/LSU	Chronic Disease	08.08.17	Approved	Pending
08.28.17	Mental Health Outcomes in Survivors of Childhood ALL Treated with Chemotherapy-only Protocols by Era	Nannes/Duke University	Chronic Disease	09.16.17	Approved	Approved
09.09.17	Persistence of fatigue and associated factors in adult survivors of childhood cancer	Krull/St. Jude	Cancer Control	09.28.17	Approved	Pending
09.11.17	Neurocognitive outcomes in survivors of childhood acute lymphoblastic leukemia treated with chemotherapy only	Van der Plas/Sick Kids	Chronic Disease	09.28.17	Approved	Approved
10.11.17	Neurocognitive Functioning, Emotional and Quality of Life in Asian or Pacific Islander Survivors	Sato/Ochanomizu University Japan		10.19.17	Approved	Approved
12.19.17	Psychosocial and Neurocognitive Outcomes in Survivors of Hodgkin Lymphoma	Phillips/SJCRH Williams/SJCRH	Epi/Biostats	01.03.18	Approved	Approved



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<b>Psychology (Continued)</b>						
05.01.18	Childhood Surgery and Post-Traumatic Stress Disorder Symptoms Among Survivors of Childhood Cancer	Madenci/Boston Children's; Harvard	Epi/Biostats	05.15.18	Approved	Pending
05.01.18	Childhood Surgery and Chronic Pain among Adult Survivors of Childhood Cancer	Madenci/Boston Children's; Harvard	Epi/Biostats	05.15.18	Approved	Pending
08.28.18	Neighborhood Socioeconomic/Environmental Disadvantage and Psychosocial Outcomes in CCSS Survivors	Bai/Emory University	Cancer Control	09.07.18	Approved	Pending
09.25.18	Temporal Changes in Employment Outcomes of Survivors of Childhood Cancer	Bhatt/SJCRH	Cancer Control (Co-Primary) Chronic Disease	09.29.18	Approved	Approved
10.24.18	Psychosomatic Profiles of Survivors of Childhood Cancer and their Siblings: Links to Health Behaviors and Health Care Utilization	Tillery/SJCRH	Cancer Control	11.07.18	Approved	Pending
01.08.19	Genetic Determinants of Posttraumatic Stress Disorder in Pediatric Cancer Survivors	Recklitis/Dana Farber Cancer Instit	Psychology (Co-Primary) Epi/Biostats	01.18.19	Approved	Pending
01.09.19	Does Sex Mediate the Relationship between Treatment Exposures and Functional Outcomes?	Peterson/ Princess Margaret Cancer Center	Epi/Biostats Chronic Disease	01.18.19	Approved	Pending
<b>SECOND MALIGNANT NEOPLASMS</b>						
04.10.08	Multiple Subsequent Neoplasms	Robison/SJCRH			Approved	Approved
06.20.08	GH Therapy and Brain Tumors as SMNs	Patterson/Emory University	Chronic Disease	03.16.09	Approved	Not Approved
12.18.08	Colorectal Cancer as SMN	Henderson/Univ. of Chicago		01.12.09	Approved	Approved
09.11.09	Late Occurring Secondary Leukemias in Survivors of Childhood Cancers	Nottage/SJCRH		10.06.09	Approved	Approved
05.25.10	Melanoma as a Second Malignant Neoplasm	Pappo/SJCRH	Genetics	06.14.10	Approved	Approved
06.18.10	Breast Cancer Following Chest RT	Oeffinger/MSKCC	Chronic Disease	07.01.10	Approved	Approved
10.28.10	Primary Tumor Recurrence and SMN After Pregnancy	Rokitka/Roswell Park		11.10.10	Approved	Pending
11.09.10	SMN After Diabetes Mellitus	Chang/UCSF	Chronic Disease	11.23.10	Approved	Pending
11.11.10	Breast Cancer Risk Factors	Inskip/NCI		12.07.10	Approved	Approved
11.16.10	Radiation Dose and Risk of Meningioma	Rajaraman/NCI	Epi/Biostats		Hold	_____
02.03.11	Renal Cell Carcinoma	Wilson/SJCRH		03.09.11	Approved	Approved
04.13.11	Gynecological Malignancies	Nathan/Sick Kids		05.03.11	Approved	Pending

Date Received	Title	Author/ Institution	Secondary Working Group(s)	Date Investigator Notified	AOI Outcome	Concept to Publication Committee
<b>Second Malignant Neoplasms (Continued)</b>						
04.20.11	Development and Validation of an Absolute Risk Prediction Model for Thyroid Cancer in Childhood Cancer Survivors	Ronckers/Netherlands	Epi/Biostats	05.03.11	Approved	Approved
04.27.11	Testicular Cancer Following Pediatric Cancer	Oeffinger/MSKCC	Chronic Disease	05.10.11	Approved	Pending
05.03.11	Development of Radiobiologic Models of Second Cancer Risk for Childhood Cancer Patients Treated with Radiation Therapy	Hodgson/Princess Margaret	Epi/Biostats	06.02.11	Approved	Approved
05.09.11	Risk of Breast Cancer in Survivors Not Exposed to Chest Radiation	Henderson/Univ. of Chicago	Genetics	06.02.11	Approved	Approved
05.30.11	Breast Cancer Following Spinal Radiation	Moskowitz/MSKCC	Cancer Control Epi/Biostats	06.22.11	Approved	Approved
08.11.11	Subsequent Neoplasms in Adult Survivors of Childhood Cancer in Relation to Weight and Physical Activity	George/NCI	Cancer Control Epi/Biostats Psychology	08.21.11	Approved	Not Approved
08.31.11	Lymphoma as SMN	Suh/University of Chicago		09.21.11	Approved	Not Approved
04.03.12	Late Second Neoplasms in Long-Term Survivors of Childhood Cancer	Turcotte/University of Minn.	Epi/Biostats	04.26.12	Approved	Approved
06.07.12	Second Malignant Neoplasm in Down Syndrome Survivors Of Childhood Cancer	Xavier/MUSC	Genetics	07.16.12	Approved	Pending
07.03.12	Pooled International Study of Radiation Related Intracranial Tumors	Inskip/NCI		07.16.12	Approved	Approved
09.18.12	Exposure-specific Absolute Risks of Second Primary Cancer and Cardiovascular Disease for Five-Year Survivors of Childhood Hodgkin's Lymphoma	Kovalchik/NCI	Cancer Control Chronic Disease	10.05.12	Approved	Pending
11.27.12	Subsequent Neoplasms in Survivors of Medulloblastoma at St. Jude Children's Research Hospital	Tsui/SJCRH	Chronic Disease	01.10.13	Approved	Approved
01.08.13	Beyond radiation: Understanding Thyroid Cancer Risk in Childhood Cancer	Turcotte/University of Minn.	Epi/Biostats	04.02.13	Approved	Pending
04.14.13	Comparison of Radiation Dose Reconstruction Methods for Subsequent Neoplasm Studies	Morton/NCI	Epi/Biostats Genetics	05.15.13	Approved	Approved

Date Received	Title	Author/ Institution	Secondary Working Group(s)	Date Investigator Notified	AOI Outcome	Concept to Publication Committee
<b>Second Malignant Neoplasms (Continued)</b>						
07.24.13	HPV-related SMNs in Childhood Cancer Survivors	Alexander/University of Chicago		08.19.13	Approved	Approved
10.02.13	Radiation Dose Reconstruction Methods for Intensity Modulated Radiation Therapy (IMRT)	Howell/MD Anderson	Epi/Biostats Chronic Disease	10.14.13	Approved	Withdrawn
01.16.14	Changing Patterns of SNs in Childhood Cancer Survivors: Comparison of Survivor Cohorts	Turcotte/University of Minnesota	Epi.biostats	02.11.14	Approved	Approved
01.14.14	NF1 and SMN (Ancillary Study)	Bhatia/UAB	Genetics	02.19.14	Approved	Approved
01.30.14	Breast Cancer in the Modern Treatment Era	Henderson/Univ. of Chicago		02.11.14	Approved	Approved
04.23.14	Prediction Model: Breast Cancer in Women Irradiated for a Pediatric Malignancy (Ancillary)	Moskowitz/MSKCC	Cancer Control		Approved	Approved
12.05.14	Changing Patterns of Non-Melanoma Skin Cancer in Childhood Cancer Survivors Who Received Radiation Therapy	Griffith/University of Miami	Epi/Biostats	01.15.15	Approved	Pending
12.25.14	The Impact of Radiation Dose Uncertainty and Heterogeneity on Subsequent Breast Cancer Risk	Berrington/NCI	Epi/Biostats	01.15.15	Approved	Pending
02.09.15	Cause-specific Mortality Among Survivors with Thyroid Subsequent Malignant Neoplasm	Barnea/MSKCC	Cancer Control	04.26.15	Approved	Approved
07.17.15	Lung Cancer as Subsequent Malignant Neoplasm	Ghosh/U of Minn		08.30.15	Approved	Approved
09.18.15	Patterns of CNS Neoplasms in Survivors of Childhood Cancer: A Report from the CCSS	Phelan/U of Minn.	Epi/Biostats	09.30.15	Approved	Pending
06.23.16	Subsequent Neoplasms Among Childhood Cancer Survivors Exposed to Chemotherapy and Not Radiation	Turcotte/U of Minn.	Epi/Biostats	07.26.16	Approved	Approved
08.04.17	Treatment Modifications and Provider Decision Making in the Management of Subsequent Breast Cancers Among Survivors (Ancillary Study)	Turcotte/U of Minn	Cancer Control Epi/Biostats	09.01.17	Approved	Pending
10.26.17	International Pooled Analysis of Breast Cancer Risk after Treatment for Childhood and Young Adult Cancer	Ronckers/Emma Children's Hospital/AMC	Epi/Biostats	11.08.17	Approved	Pending
10.12.18	Risk and Risk Factors for Colorectal Cancer in Survivors of Childhood Cancer	Henderson/Univ Chicago		11.07.18	Approved	Pending

# Statistical Center Current Project List

Concept	Project	Investigator	Stat Center Contact	Secondary/Sr. Statistician	Status
Submitted & Draft Manuscripts					
13-16	Comparison of radiation dose reconstruction methods for SN studies	Sara Schonfeld/Lindsay Morton	NCI analysts	Wendy	Submitted Radiation Research
11-20	Solid Organ transplant after Childhood Cancer	Drew Dietz	Kristy	Wendy	Under revision for Lancet Oncology
16-12	Prescription Psychoactive Medication Use in Adolescent Survivors	Yin Ting Cheung	Wei Liu	Kumar	Submitted Psycho-Oncology
17-06	Subsequent neoplasms among survivors not treated with radiation	Lucie Turcotte	Qi	Yutaka	Revised resubmitted JCO
15-08	Impact of Radiation Dose and Volume to the Pancreas on Risk of Diabetes Mellitus in Survivors Treated with Abdominal Radiation	Danielle Novetsky-Friedman	Wendy/Chaya	Chaya	Under revision for JNCI
17-09	Adherence to surveillance for second malignant neoplasms and cardiac dysfunction	Adam Yan	Yan Chen	Yutaka	Submitted to Lancet Oncology
16-18	Longitudinal CV outcomes	Dan Mulrooney	Geehong	Kiri	Submitted to BMJ
16-20	Psychological, Behavioral and Educational outcomes in AML survivors: compare BMT vs. Not	Kristen Stefanski	Pam	Wendy	Submitted to JCO
13-09	Health outcomes among survivors of adolescent and young adult cancer	Eugene Suh	Kayla	Wendy	Under revision for Lancet Oncology
16-14	Incidence of anorectal complications	Arin Medinci /Chris Weldon	Qi	Yutaka	Submitted to Cancer
16-10	Secondary Cancers among NF1 Cancer Survivors	Smita Bhatia	Pam	Wendy/Local Statistician	Under revision for JCO
18-04	Frailty in childhood cancer survivors	Samah Hayek	Samah	Kiri	Submitted to JCO
15-16	Human papillomavirus (HPV)-associated malignancies as second cancers in childhood cancer survivors: a report from the Childhood Cancer Survivor Study	Tara Henderson	John	Wendy	Draft manuscript
11-09	Inverse probability censored weighting (IPCW) to adjust for selection bias and drop out	Chonghzi Di	Kayla	Wendy	Draft manuscript
09-15	Genitourinary outcomes in childhood cancer survivors	Margarett Shnorhavian	Pam	Wendy	Draft manuscript (updating analysis)
Internal	Missing data imputation (methodology)	Leah Martin/Qi Liu	Yutaka	Yutaka	Draft manuscript
13-04	Longitudinal Eval of Chronic Disease and Health Status in Soft Tissue Sarcoma Survivors	Emily Mueller	Pam	Wendy	Draft manuscript
17-04	Longitudinal Pain in long-term survivors of childhood cancer: A report from the Childhood Cancer Survivor Study	Cynthia Karlson	Wei Liu	Kumar	Draft manuscript
15-03	Comparison of risks of mortality (all-cause, cause-specific) and invasive second or subsequent cancers: CCSS and BCSS	Miranda Fidler	Qi/Yutaka/Wendy	Miranda Fidler	Draft manuscript

Concept	Project	Investigator	Stat Center Contact	Secondary/Sr. Statistician	Status
17-03	Posttraumatic stress contributor to behavioral health outcomes	Emily Crochet	Miingjuan Wang	Kumar	Draft manuscript
17-02	Projections in trends in life expectancy and QALY	Jennifer Yeh	Qi	Yutaka	Submitted to Annals of Internal Med
15-07	Changes in Long-Term Outcomes in Hodgkin Lymphoma Survivors with Contemporary Risk-Adapted Therapy	Kevin Oeffinger	Kayla	Wendy	Draft manuscript
16-06	Psychosocial outcomes in adolescent survivors of Wilms Tumor	Rebecca Foster	Mingjuan Wang	Kumar	Submitted to JNCI
16-19	NF1 effects on late outcomes	Peter deBlank	Nan Li	Yutaka	Draft manuscript
12-19	Health-related locus of control in childhood cancer survivors	Cara Kimberg	Nan Zhang	Kumar	Manuscript in preparation
14-18	Cognitive and academic difficulties in survivors of head/neck rhabdomyosarcomas	Melissa Schapiro	Wei Liu	Kumar	Manuscript in preparation
14-22	Characteristics of the Expanded Childhood Cancer Survivor Study Cohort: 5-Year Survivors Diagnosed from 1970-1999	Mertens/Leisenring	John	Wendy	Manuscript in preparation
14-21	Impact of Endocrine disorders on HRQL and Physical Activity	Kamnesh Pradhan	Yan Chen	Yutaka	Submitted to JCFM
09-16	First and recurrent stroke in long-term survivors of childhood cancer, paper 2	Sabine Mueller	Yan Chen	Yutaka	Manuscript in preparation
16-15	Incidence, Predictors and Impact of Hearing Impairment	Austin Brown	Kristy	Wendy	Submitted to Neurology
15-01	Using the Cumulative Illness Rating Scale to characterize the burden of chronic conditions	Adam Esbenschade	Kiri/Lu Lu	Kiri / Wendy	Manuscript in preparation
17-12	Physical activity as a predictor of neurocognitive outcomes	Kim Edelstein	Yan Chen	Yutaka	Manuscript in preparation
18-16	Long-term outcomes of survivors of ALL	Stephanie Dixon	Yan Chen	Yutaka	Manuscript in preparation
05-06	Risk of Increased Morbidity and Mortality in Underweight Survivors	Emily Tonorezos/Lillian Meacham	Wendy	Chaya	Manuscript in preparation
Analyses Ongoing					
04-12	BCC risks due to sun exposure and radiation	Ann Mertens	Wendy	Wendy	Analyses ongoing
14-15	Breast cancer risk calculator after chest radiation	Chaya Moskowitz	Wendy	Chaya (MSKCC)	Analyses ongoing
11-22	Chronic Health Conditions and Employment Status Transitions	Anne Kirchhoff	Wendy	Anne K.	Incorporated into new proposal 19-15
Ancillary	Thyroid cancer SNP study	Yuri Nikiforov / Smita Bhatia	John	Wendy	Case / Control selection, data sent.
Ancillary	Genetic susceptibility to Obesity After Treatment for Childhood Cancer	Kala Kamdar	Kristy	Local Statistician	Subjects selected, data sent. Abstract submitted
Ancillary	Breast Cancer after HL collaboration with Dutch group	Smita Bhatia	John	Wendy	Data sent.
13-05	Breast Cancer in Childhood Cancer Survivors: The impact of screening on morbidity	Tara Henderson	Chaya		Analyses ongoing

Concept	Project	Investigator	Stat Center Contact	Secondary/Sr. Statistician	Status
13-15	Predictors of receipt of a treatment summary, and its relationship to receipt of risk-based health care, incidence of morbidities and premature mortality	Jennifer Ford/Tara Henderson	Wendy	Chaya	Data sent
14-03	Estimating the burden of disease associated with late-effects among childhood cancer survivors	Jennifer Yeh	Wendy/Pam	Jennifer Yeh/Harvard Statistician	Data sent. Paper 1 accepted, Add'l papers in analysis
12-14	Cost Effectiveness of Breast Cancer Screening Guidelines for Female Survivors	Lennie Wong	Yan Chen	Yutaka/Wendy	Data sent
14-09	Epigenomic profiling of metabolic outcomes	Philip Lupo	Yutaka	Yutaka/Philip	Analyses ongoing
15-06	Exome sequencing to discover genetic variants that increase risks of subsequent neoplasm	Lindsay Morton	Wendy/Yutaka	NCI Statistician	Analyses ongoing
15-04	Risk of breast and thyroid cancer after radiotherapy for Hodgkin's Lymphoma: Can reconstructed dosimetry data be used to predict secondary malignancies	David Hodgson	Pam	Wendy	Data sent, Analyses complete
13-01	Pooled International Study of Radiation related Tumors of the Brain and Nervous System	Peter Inskip	NCI statisticians	Pam	Sent data
15-09	Health Care Financial Burden and Missed Opportunities for Care	Doug Fair	Wendy	Anne Kirchhoff	Analyses ongoing
15-12	Tiled study design: using temporal overlap as a method to extend longitudinal follow-up among carefully selected time-limited cohorts.	Eric Chow	Qi	Yutaka	Analyses ongoing
15-11	Use of an incentive to increase biologic sample (Oragene) participation	Aaron McDonald	Mingjuan Wang	Kumar	Analyses complete
15-02	Esophageal disease after childhood cancer therapy: Experience from three childhood cancer survivor cohorts	Peter Asdahl	Pam	Wendy	Data sent from CCSS. Additional SJL data to be sent.
15-14	Burden of Morbidity after Basal Cell Carcinoma in Childhood Cancer Survivors	Smita Bhatia	John	Wendy	Main analyses completed - check w/ Smita
16-01	Cause-Specific Mortality among Childhood Cancer Survivors with a Subsequent Thyroid Cancer	Dana Barnea	Yan Chen	Yutaka	Analyses ongoing
16-17	CCSS: Psychological distress, functional dependence and neurologic morbidity among adult survivors of childhood cancer treated with CNS-directed therapy	Tara Brinkman	Chenghong Li	Kumar	Analysis completed
17-05	Quantifying individual absolute risk of premature ovarian failure in female survivors	Yan Yuan	Yutaka	Yan Yuan	Data sent
17-08	Cost-effective cardiomyopathy surveillance strategies in childhood cancer survivors	Matthew Ehrhardt	Yutaka	Yutaka	Generate data set
16-11	Neurocognitive functioning in survivors of osteosarcoma	Nina Kadan-Lottick	Mingjuan Wang	Kumar	Analyses complete
17-15	Genome-Wide Association Study of Stroke and Myocardial Infarction	Dan Bowers / Alanna Morrison	John	Wendy/Local Statistician	Sent data

Concept	Project	Investigator	Stat Center Contact	Secondary/Sr. Statistician	Status
17-16	Genetic Architecture of Diabetes Mellitus in Long-term Survivors of Childhood Cancer	Nisha Rathore/Philip Lupo	Kayla	Wendy	Sent data
17-19	Long-term Gallbladder and Biliary Disease in Survivors of Childhood Cancer	Bryan Diffenbach	Nan Li	Yutaka	Analyses ongoing
17-20	GWAS of Childhood Cisplatin-induced Tinnitus and Meta-Analysis with Adult GWAS of Cisplatin-induced Tinnitus	Eileen Dolan	Wendy/Yutaka	Yutaka	Completed validation. Sent data for discovery portion
17-18	Associations between special education services, educational attainment, and chronic health conditions	Lisa Bashore	Chenghong Li	Kumar	Analyses ongoing
18-01	Self-Reported Neuropsychological Outcomes in Adult Survivors of Neuroblastoma	Caroline Hesko	Wei Lu	Kumar	Analyses ongoing
18-03	Temporal trends in late-onset morbidity and mortality in rhabdomyosarcoma survivors	Pooja Hingorani	Mingjuan Wang	Kumar/Kiri	Analyses ongoing
17-17	Chronic Pain in Adult Survivors of Childhood Cancer: Utilization of the Childhood Cancer Survivor Study mHealth Platform in Assessing Pain and Wearable Sensor Technology	Nicole Alberts		Wendy	Selected subjects; Study underway
17-13	Infertility, assisted reproductive technology utilization and pregnancy outcomes (CCSS and SART)	Kimberly Keefe	Kayla	Wendy	Analyses ongoing
17-11	Breast Cancer Risk in the Modern Treatment Era	Tara Henderson	Qi	Yutaka	Analyses ongoing
18-10	Neurocognitive outcomes for ALL survivors treated with chemotherapy only	Ellen van der Plas	Weiyu	Yutaka	Analyses ongoing
18-07	Changes in Long-Term Outcomes in Neuroblastoma Survivors Treated with Contemporary Therapies	Danielle Friedman	Pam	Wendy	Analyses ongoing
18-19	Analysis of Genetic Variants from Candidate Anthracycline-responsive Genes in iPSC-Cardiomyocytes as Predictors of Cardiotoxicity	Monica Reyes	Kayla	Wendy	Phenotype data sent
18-08	Mental health outcomes in adult survivors of childhood acute lymphoblastic leukemia treated with chemotherapy-only	Caleb Nannes	Kayla	Wendy	Analyses ongoing
18-09	Health care utilization by survivors of childhood cancer	Valerie Arseneault	Weiyu	Yutaka	Analyses ongoing
18-11	The impact of chronic conditions on the psychosexual function of adult female survivors	Kari Bjornard	Xiaofei	Kiri	Analyses ongoing
19-02	Genetic risk prediction profiles for fracture among childhood cancer survivors	Cindy Im	Kayla	Wendy	Phenotype data set sent
19-01	GWAS of Modulators of Pregnancy in Long Term Survivors of Pediatric Cancer	Seth Rotz	Pam	Wendy	Phenotype data set sent
18-06	Long term follow-up of Osteosarcoma survivors	Kerri Beckett	Yan Chen	Yutaka	Analyses ongoing
18-17	Psychosocial Concerns among Siblings of Childhood Cancer Survivors	David Buchbinder		Kumar	Analyses ongoing

Concept	Project	Investigator	Stat Center Contact	Secondary/Sr. Statistician	Status
18-12	Prevalence and predictors of loneliness in young adult survivors of childhood cancer	Ameera Fayad		Kumar	Analyses ongoing
18-05	Genome-Wide Association Study (GWAS) of Late-occurring Intestinal Obstruction	Arin Madenci	Yadav	Yutaka	Analyses ongoing
Ancillary	CCSS + SJLIFE: R21 Grant Analysis: Symptoms progress and adverse health outcomes in adult childhood cancer survivors	Huang I-Chan	Chenghong Li	Kumar	Analysis ongoing
18-15	Exercise and Chronic Health Conditions and Health Care Utilization	Jessica Scott		Yutaka	Analyses ongoing
18-18	Determinants of Longitudinal Health-related Quality of Life Change	Maritza Ruiz/ I-Chan Huang		Yutaka	Analyses ongoing
17-10	Trends in Utility-based Health-related Quality of Life	Jennifer Yeh		Yutaka	Analyses ongoing
19-05	Genetic Susceptibility to Neurocognitive Impairment	Michael Scheurer		Wendy	Phenotype data set creation
18-14	Long-term outcomes among survivors of childhood acute myeloid leukemia	Lucie Turcotte	John		Analyses ongoing
19-11	Predictors of Neurocognitive and Psychosocial Outcomes in Long-Term Survivors of Hodgkin Lymphoma	AnnaLynn Williams		Kumar	Analyses ongoing
19-03	Physical Functioning and Chronic Health Conditions in Pediatric ALL and NHL survivors treated with contemporary therapy	Kari Bjornard	Geehong	Kiri	Analyses ongoing
19-12	A genome-wide association study of hypertension	Jeanne Pierzynski		Yutaka	New analysis
19-06	Peripheral motor and sensory neuropathy and associated outcomes	Rozalyn Rodwin			Analyses ongoing
Approved Concepts in Queue					
15-05	Cyclophosphamide Equivalent Dosing and Male Health Late Effects	Lillian Meacham			On hold till other projects finished - MHQ data
17-07	Financial toxicity in survivors and siblings + survey tool	Paul Nathan			Needs FU6 Financial Tox survey
18-20	Incidence of and Risk Factors for Late End Stage Renal Disease	Bryan Dieffenbach			Needs kidney dosimetry
19-08	Lung Cancer as a Subsequent Malignant Neoplasm	Taumoha Ghosh			
19-07	Thirty-Five Year Follow-Up of Childhood Wilms Tumor: Impact of Treatment Era on Long-Term Health Outcomes	Brent Weil			Needs kidney dosimetry
19-09	Outcomes of Adult Survivors of Childhood Astrocytoma and Ependymoma Across Three Decades of Diagnosis and Treatment	Kate Rae / Pete deBlank	Yutaka/Wendy		
19-10	Long-term Burden of Major Surgical Procedures	Bryan Dieffenbach			Needs surgery data
Proposals Under Development					



Concept	Project	Investigator	Stat Center Contact	Secondary/Sr. Statistician	Status
	Predictors of healthy aging in childhood cancer survivors	Kiri Ness	Wendy/Yutaka		
	Impact of preceived social support on long term medical follow up	Yelena Wu	Wendy		
19-13	Neurocognitive Functioning, Emotional Status and Quality of Life among Asian/Pacific Islander Childhood Cancer Survivors	Satomi Sato	Yutaka		
	Late Effects of Tyrosine Kinase Inhibitors in Children and Adolescents with Chronic Myeloid Leukemia	Michael Roth	Wendy		
	Long-term morbidity in survivors of childhood chronic myelogenous leukemia (CML)	Olatundun Williams / Nobuko Hijiya	Wendy		
	Late effects due to local control modalities for childhood pelvic sarcoma	Arin Madenci	Yutaka		
19-15	Temporal Changes in Unemployment of survivors of childhood cancer	Neel Bhatt	Wendy		
	Statin Therapy and Cardiovascular outcomes	Narupa Raghunathan			
19-14	Temporal changes in therapy and neurocognitive outcomes, social attainment, and quality of life in adult survivors of pediatric brain tumors	Ingrid Tonning Olsson			
	Genetic determinants of posttraumatic stress disorder in pediatric cancer survivors	Donghao Lu / Christopher Recklitis			
	Developing a clinical and genetic risk prediction model for diabetes mellitus	Melissa Richard / Philip Lupo			
	Polypharmacy and patterns of prescription medication use among childhood cancer survivors	Caitlin Murphy			
Ancillary Study Grant Proposals					
	Adult Neuropsychological Late-Effects in Childhood Low Grade Brain Tumors	Doug Ris	Wendy		Responding to JCO reviewers
	Evaluation of Cardiac Outcomes in Survivors (ECHOS)	Melissa Hudson/Cheryl Cox	Kayla/Wendy		Multiple manuscripts published
	Insure (Needs Assessment) - Ancillary	Cheryl Cox	Wendy		Published
	Projecting breast cancer risk	Chaya Moskowitz/Kevin Oeffinger	Chaya		Funded, multiple manuscript published
	Efficacy of Tobacco Quit Line for Cancer Survivors	Bob Klesges	Wei/Kumar		Published
	Are Childhood Cancer Survivors Underinsured?	Elyse Park	Wendy		Several Publications
	EQUAL: Exercise And QUALity diet After Leukemia	Emily Tonorezos	Chaya		Enrolling
Data Management					
	Expansion cohort surgery records data base freeze	Chris Weldon and others	John	Wendy	In progress, May 2019
	Grading, coding and incorporating chronic conditions reported on FU5 for full cohort	Kevin Oeffinger and others	Kayla	Wendy	Dec, 2018, updated March 2019

Concept	Project	Investigator	Stat Center Contact	Secondary/Sr. Statistician	Status
	Update frozen data set on participation for use in Consort diagrams - include new sites, additional surveys	Kayla Stratton	Kayla/Aaron McDonald	Wendy	March, 2019
	Chronic condition coding updated to include baseline data for four new sites	Kevin Oeffinger and others	Kayla	Wendy	Dec, 2018, updated March 2019
	Cleaned and prepared for freezing 4 new site MRAF data, pending final data corrections from sites per error checks	Kayla Stratton / John Whitton	Aaron/Chris	Wendy	Dec, 2018, updated March 2019
	Cleaned and prepared for freezing 4 new site baseline survey data	John Whitton	Aaron/Chris	Wendy	July, 2018
	Cleaned and incorporated SMN data reported through the FU5 survey	John Whitton	Joe/Greg/Lucie	Wendy	May, 2018
	Restructured and documented combined MDA Radiation for both cohorts for distribution from Seattle to other analysts	Pam Goodman	Rebecca / Susan	Wendy	May, 2018
	Developed participation weights for IPW analyses for each survey and for time-to-event analyses	Kayla Stratton	Wendy		Sept, 2017
	Cleaned and incorporated recently reported SMN data	John Whitton	Joe/Greg/Lucie	Wendy	May, 2017
	Cleaned and freeze data from FU5 survey	John Whitton	John/Wendy	Greg, Aaron, Chris	May, 2017
	New Frozen data set - All expansion, original, siblings, SMN and mortality updates	John Whitton / Kayla Stratton	Pam Goodman	Wendy	Sept, 2016
	Modify and share chronic disease SAS program files and documentation with Bhatia BMTSS	Kayla Stratton	Smita and staff	Wendy	Sept, 2016; May, 2017
	Coding of Expansion Baseline chronic conditions to CTCAE	Kevin Oeffinger and others	Kayla	Wendy	Survivors Completed January, 2015, Siblings and Mortality Updated Sept, 2016
	Creation of frozen data set for DNA samples	Stella Davies	Sue Huang/Lu Lu	Kiri	Data Updated - July, 2016
	Validation, Cleaning and Freezing of Expansion Cohort SMN	Greg Armstrong / Joe Neglia	John Whitton	John, Aaron,	Completed April, 2015
	Conversion of SMN data from ICDO-2 to ICDO-3	Greg Armstrong / Joe Neglia	Pam Goodman	John, Wendy	Completed January, 2015
	Cleaning and freezing of expansion mortality data	Greg Armstrong / Joe Neglia	Pam Goodman	John, Wendy	Completed November 2014, Updated April 2015
	Creation of Frozen data sets for baseline expansion	John Whitton	John/Wendy	Sandrine, Pam, Aaron, Chris	Completed November 2014, Updated April 2015
	Creation of Frozen data set for expansion MRAF and MDA RT data	Kayla Stratton	Kayla/Pam/Wendy	Wendy, Aaron, Chris	Completed November 2014, Updated April 2015
	Audit and freeze of audited SMN Data	John Whitton	Joe/Lucie	Wendy	Completed Dec, 2012
	Cleaning of Elyse Park RO1 Insurance Study Data	Elyse Park	John/Chris Vukadinovich	Wendy	Most recent freeze May, 2013
	Created Frozen data through FU2007 data (Q's, Mortality 2007, SMN)	John Whitton	Kiri/Aaron	Wendy	Data frozen, Jan, 2011

Concept	Project	Investigator	Stat Center Contact	Secondary/Sr. Statistician	Status
	CCSS MHQ data error check	John/Chris	John	Kumar/Wendy	Complete.
	Creation of Web based Public Use tables	Jim Gurney	Kayla	John	Complete - Tables on St Jude Website
	"Toolbox" variables creation	John Whitton	John	Pam/Kayla/Kristy	Ongoing.
	Documentation of all data sets	John Whitton	Pam/Kayla	Wendy	Developing comprehensive documentation for Q'naires.
	Creation of Chest RT/ Breast Ca related database	Kevin Oeffinger	John	Wendy	Data set created May, 2010
	Creating frozen data set on participation for use in Consort diagrams	Kayla Stratton	Kayla/Aaron McDonald	Wendy	Survivors and siblings complete.

# Publications and Manuscripts

## Peer-reviewed Manuscripts

1. Rauck AM, Green DM, Yasui Y, Mertens A, Robison LL. Marriage in the survivors of childhood cancer: a preliminary description from the Childhood Cancer Survivor Study. *Med Pediatr Oncol*, 1999; 33(1): 60-3.
2. Yasui Y, Whitton J. Problems in using age-stratum-specific reference rates for indirect standardization. *J Clin Epidemiol*, 1999; 52(5): 393-8.
3. Sklar C, Whitton J, Mertens A, Stovall M, Green D, Marina N, Greffe B, Wolden S, Robison L. Abnormalities of the thyroid in survivors of Hodgkin's disease: data from the Childhood Cancer Survivor Study. *J Clin Endocrinol Metab*, 2000; 85(9): 3227-32.
4. Neglia JP, Friedman DL, Yasui Y, Mertens AC, Hammond S, Stovall M, Donaldson SS, Meadows AT, Robison LL. Second malignant neoplasms in five-year survivors of childhood cancer: Childhood Cancer Survivor Study. *J Natl Cancer Inst*, 2001; 93(8): 618-29.
5. Mertens AC, Yasui Y, Neglia JP, Potter JD, Nesbit ME Jr, Ruccione K, Smithson WA, Robison LL. Late mortality experience in five-year survivors of childhood and adolescent cancer: the Childhood Cancer Survivor Study. *J Clin Oncol*, 2001; 19(13): 3163-72.
6. Emmons K, Li FP, Whitton J, Mertens AC, Hutchinson R, Diller L, Robison LL. Predictors of smoking initiation and cessation among childhood cancer survivors: a report from the Childhood Cancer Survivor Study. *J Clin Oncol*, 2002; 20(6): 1608-16.
7. Kadan-Lottick NS, Robison LL, Gurney JG, Neglia JP, Yasui Y, Hayashi R, Hudson M, Greenberg M, Mertens AC. Childhood cancer survivors' knowledge about their past diagnosis and treatment: Childhood Cancer Survivor Study. *JAMA*, 2002; 287(14): 1832-9.
8. Robison LL, Mertens AC, Boice JD, Breslow NE, Donaldson SS, Green DM, Li FP, Meadows AT, Mulvihill JJ, Neglia JP, Nesbit ME, Packer RJ, Potter JD, Sklar CA, Smith MA, Stovall M, Strong LC, Yasui Y, Zeltzer LK. Study design and cohort characteristics of the Childhood Cancer Survivor Study: a multi-institutional collaborative project. *Med Pediatr Oncol*, 2002; 38(4): 229-39.
9. Sklar CA, Mertens AC, Mitby P, Occhiogrosso G, Qin J, Heller G, Yasui Y, Robison LL. Risk of disease recurrence and second neoplasms in survivors of childhood cancer treated with growth hormone: a report from the Childhood Cancer Survivor Study. *J Clin Endocrinol Metab*, 2002; 87(7): 3136-41.
10. Zebrack BJ, Zeltzer LK, Whitton J, Mertens AC, Odom L, Berkow R, Robison LL. Psychological outcomes in long-term survivors of childhood leukemia, Hodgkin's disease and non-Hodgkin's lymphoma: a report from the Childhood Cancer Survivor Study. *Pediatrics*, 2002; 110(1 Pt 1): 42-52.
11. Green DM, Whitton JA, Stovall M, Mertens AC, Donaldson SS, Ruymann FB, Pendergrass TW, Robison LL. Pregnancy outcome of female survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. *Am J Obstet Gynecol*, 2002; 187(4): 1070-80.
12. Mertens AC, Yasui Y, Liu Y, Stovall M, Hutchinson R, Ginsberg J, Sklar C, Robison LL. Pulmonary complications in survivors of childhood and adolescent cancer: a report from the Childhood Cancer Survivor Study. *Cancer*, 2002; 95(11): 2431-41.
13. Gurney JG, Kadan-Lottick NS, Packer RJ, Neglia JP, Sklar CA, Punyko JA, Stovall M, Yasui Y, Nicholson HS, Wolden S, McNeil DE, Mertens AC, Robison LL. Endocrine and cardiovascular late effects among adult survivors of childhood brain tumors: Childhood Cancer Survivor Study. *Cancer*, 2003; 97(3): 663-73.
14. Green DM, Whitton JA, Stovall M, Mertens AC, Donaldson SS, Ruymann FB, Pendergrass TW, Robison LL. Pregnancy outcome of partners of male survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. *J Clin Oncol*, 2003; 21(4): 716-21.
15. Mitby PA, Robison LL, Whitton JA, Zevon MA, Gibbs IC, Tersak JM, Meadows AT, Stovall M, Zeltzer LK, Mertens AC. Utilization of special education services and educational attainment among long-term survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. *Cancer*, 2003; 97(4): 1115-26.

16. Oeffinger KC, Mertens AC, Sklar CA, Yasui Y, Fears T, Stovall M, Vik TA, Inskip PD, Robison LL. Obesity in adult survivors of childhood acute lymphoblastic leukemia: a report from the Childhood Cancer Survivor Study. *J Clin Oncol*, 2003; 21(7): 1359-65.
17. Nagarajan R, Neglia JP, Clohisy DR, Yasui Y, Greenberg M, Hudson M, Zevon MA, Tersak JM, Ablin A, Robison LL. Education, employment, insurance, and marital status among 694 survivors of pediatric lower extremity bone tumors: a report from the Childhood Cancer Survivor Study. *Cancer*, 2003; 97(10): 2554-64.
18. Boice JD Jr, Tawn EJ, Winther JF, Donaldson SS, Green DM, Mertens AC, Mulvihill JJ, Olsen JH, Robison LL, Stovall M. Genetic effects of radiotherapy for childhood cancer. *Health Phys*, 2003; 85(1): 65-80.
19. Packer RJ, Gurney JG, Punyko JA, Donaldson SS, Inskip PD, Stovall M, Yasui Y, Mertens AC, Sklar CA, Nicholson HS, Zeltzer LK, Neglia JP, Robison LL. Long-term neurologic and neurosensory sequelae in adult survivors of a childhood brain tumor: Childhood Cancer Survivor Study. *J Clin Oncol*, 2003; 21(17): 3255-61.
20. Hudson MM, Mertens AC, Yasui Y, Hobbie W, Chen H, Gurney JG, Yeazel M, Recklitis CJ, Marina N, Robison LR, Oeffinger KC. Health status of adult long-term survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. *JAMA*, 2003; 290(12): 1583-92.
21. Gurney JG, Ness KK, Stovall M, Wolden S, Punyko JA, Neglia JP, Mertens AC, Packer RJ, Robison LL, Sklar CA. Final height and body mass index among adult survivors of childhood brain cancer: Childhood Cancer Survivor Study. *J Clin Endocrinol Metab*, 2003; 88(10): 4731-9.
22. Kadan-Lottick NS, Friedman DL, Mertens AC, Whitton JA, Yasui Y, Strong LC, Robison LL. Self-reported family history of cancer: the utility of probing questions. *Epidemiology*, 2003; 14(6): 737-40.
23. Emmons KM, Butterfield RM, Puleo E, Park ER, Mertens A, Gritz ER, Lahti M, Li FP. Smoking among participants in the Childhood Cancer Survivors Cohort: the Partnership for Health Study. *J Clin Oncol*, 2003; 21(2): 189-96.
24. Yasui Y, Liu Y, Neglia JP, Friedman DL, Bhatia S, Meadows AT, Diller LR, Mertens AC, Whitton J, Robison LL. A methodological issue in the analysis of second-primary cancer incidence in long-term survivors of childhood cancers. *Am J Epidemiol*, 2003; 158(11): 1108-13.
25. Yeazel MW, Oeffinger KC, Gurney JG, Mertens AC, Hudson MM, Emmons KM, Chen H, Robison LL. The cancer screening practices of adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. *Cancer*, 2004; 100(3): 631-40.
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## Manuscripts Submitted for Publication

1. Bhatia S, Chen Y, Wong FL, Hageman L, Smith K, Korf B, Cannon A, Leidy DJ, Paz A, Andress JE, Friedman GK, Neglia JP, Arnold M, Turcotte LM, de Blank P, Leisenring W, Armstrong GT, Robison LL, Clapp DW, Shannon K, Nakamura JL, Fisher MJ. Subsequent neoplasms after a primary tumor in individuals with Neurofibromatosis type 1. Submitted.
2. Cheung YT, Brinkman TM, Srivastava D, Leisenring WM, Howell RM, Ullrich NJ, Lommel KM, Brouwers P, Gibson TM, Robison LL, Armstrong GT, Krull KR. Prescription psychoactive medication use in adolescent survivors of childhood cancer and impact on future adult functional outcomes: a report from the Childhood Cancer Survivor Study. Submitted.
3. DeSisto J, Lucas JT, Xu K, Donson A, Lin T, Sanford B, Wu G, Tran QT, Hedges D, Hsu C, Armstrong GT, Arnold M, Bhatia S, Flannery P, Lemma R, Hardie L, Schüller U, Hoffman LM, Dorris K, Levy JM, Hankinson TC, Handler M, Liu A, Foreman N, Vibhakkar R, Jones K, Allen S, Zhang J, Baker SJ, Merchant TE, Orr BA, Green AL. Comprehensive molecular characterization of pediatric treatment-induced high-grade glioma: a distinct entity despite disparate etiologies with defining molecular characteristics and potential therapeutic targets. Submitted.
4. Foster RH, Hayashi RJ, Wang M, Liu W, Mohrmann C, Howell RM, Smith SA, Gibson TM, Srivastava D, Green DM, Oeffinger KC, Leisenring WM, Robison LL, Armstrong GT, Krull KR, Hardy KK. Psychological, educational, and social late effects in adolescent survivors of Wilms tumor: A report from the Childhood Cancer Survivor Study. Submitted.
5. Friedman DN, Moskowitz CS, Hilden P, Howell RM, Weathers RE, Smith SA, Wolden SL, Tonorezos ES, Mostoufi-Moab S, Chow EJ, Meacham LR, Chou JF, Whitton JA, Leisenring WM, Robison LL, Armstrong GT, Oeffinger KC, Sklar CA. Radiation dose and volume to the pancreas and subsequent risk of diabetes mellitus: a report from the Childhood Cancer Survivor Study. Submitted.
6. Hayek S, Gibson TM, Leisenring WM, Guida JL, Gramatges MM, Lupo PJ, Howell RM, Oeffinger KC, Bhatia S, Edelstein K, Hudson MM, Robison LL, Nathan PC, Yasui Y, Krull KR, Armstrong GT, Ness KK. Prevalence and predictors of frailty in childhood cancer survivors and siblings: a report from the Childhood Cancer Survivor Study. Submitted.
7. Madenci AL, Dieffenbach BV, Liu Q, Yoneoka D, Knell J, Gibson TM, Yasui Y, Leisenring WM, Howell RM, Diller LR, Krull KR, Armstrong GT, Oeffinger KC, Murphy AJ, Weil BR, Weldon CB. Late-onset anorectal disease and psychosocial impact in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. Submitted.
8. Mueller S, Kline C, Buerki RA, Chen Y, Yasui Y, Howell R, Oeffinger K, Leisenring W, Robison LL, Armstrong GT, Fullerton HJ, Krull KR. Impact of stroke and stroke recurrence on late mortality and psychological morbidity: a report from the Childhood Cancer Survivor Study. Submitted.
9. Mulrooney DA, Hyun G, Ness KK, Ehrhardt MJ, Yasui Y, Duprez D, Howell RM, Leisenring WM, Constine LS, Tonorezos E, Gibson TM, Robison LL, Oeffinger KC, Hudson MM, Armstrong GT. Reduced risk for major cardiac events for adult survivors of childhood cancer treated in more recent eras: a report from the Childhood Cancer Survivor Study. Submitted.
10. Schonfeld SJ, Howell RM, Smith SA, Neglia JP, Turcotte LM, Arnold MA, Inskip PD, Oeffinger KC, Moskowitz CS, Henderson TO, Leisenring WM, Gibson TM, Berrington de González A, Sampson JN, Chanock SJ, Tucker MA, Bhatia S, Robison LL, Armstrong GT, Morton LM. Comparison of radiation dose reconstruction methods to investigate late adverse effects of radiotherapy for childhood cancer: a report from the Childhood Cancer Survivor Study. Submitted.
11. Stefanski K, Anixt JS, Goodman P, Bowers K, Leisenring WM, Baker KS, Burns K, Howell R, Davies S, Robison LL, Armstrong GT, Krull KR, Recklitis C. Emotional, neurocognitive, and quality of life outcomes among survivors of childhood acute Myeloid Leukemia: a report from the Childhood Cancer Survivor Study. Submitted.
12. Suh E, Nathan PC, Stratton KL, Ford JS, Freyer DR, McNeer J, Stock W, Leisenring W, Stovall M, Krull KR, Sklar CA, Neglia JP, Armstrong GT, Oeffinger KC, Robison LL, Henderson TO. Late mortality and chronic health conditions in long-term survivors of adolescent and early young adult cancers: a report from the Childhood Cancer Survivor Study. Submitted.
13. Turcotte LM, Liu Q, Yasui Y, Henderson TO, Gibson TM, Leisenring W, Arnold MA, Howell RM, Green DM, Armstrong GT, Robison LL, Neglia JP. Chemotherapy and risk of subsequent malignant neoplasms in the Childhood Cancer Survivor Study cohort. Submitted.

14. Yan AP, Chen Y, Henderson TO, Oeffinger KC, Hudson MM, Gibson TM, Neglia JP, Leisenring WM, Ness KK, Ford JS, Robison LL, Armstrong GT, Yasui Y, Nathan PC. Adherence to surveillance for second malignant neoplasms and cardiac dysfunction in childhood cancer survivors: a report from the Childhood Cancer Survivor Study. Submitted.
15. Yeh JM, Ward ZJ, Chaudhry A, Liu Q, Yasui Y, Armstrong GT, Gibson TM, Howell R, Hudson MM, Leisenring WM, Oeffinger KC, Diller L. Early mortality in adult survivors of childhood cancer: projected improvements in recent treatment eras. Submitted.

# Childhood Cancer Survivor Study (CCSS)

## Presented Abstracts 1997 – 2019

Year	Number
2019	31
2018	29
2017	20
2016	14
2015	25
2014	18
2013	16
2012	14
2011	13
2010	18
2009	6
2008	25
2007	9
2006	14
2005	12
2004	16
2003	6
2002	17
2001	9
2000	2
1999	6
1998	1
1997	1

### 2019

**A1901** Barlow-Krelina E, Chen Y, Yasui Y, Gibson T, Ness K, Leisenring WM, Howell R, Nathan P, Oeffinger KC, Robison LL, Armstrong GT, Krull KR, Edelstein K. Physical activity and neurocognitive outcomes in adult survivors of childhood cancers: a report from the Childhood Cancer Survivor Study (CCSS). International Neuropsychology Society Annual Meeting, February 2019, poster presentation.

**A1902** Gramatges MM, Aubert G, Hariri E, Chen Y, Whitton JA, Leisenring WM, Arnold MA, Neglia JP, Yasui Y, Robison LL, Armstrong GT, Bhatia S. Shorter naïve T cell telomere length is associated with thyroid subsequent malignant neoplasm: a report from the Childhood Cancer Survivor Study (CCSS). American Association for Cancer Research Annual Meeting, March 2019, poster presentation; North American Symposium on Late Complications after Childhood Cancer, June 2019, submitted.

**A1903** Wang Z, Chang TC, Wilson CL, Kesserwan CA, Gibson TM, Li N, Easton J, Mulder H, Wu G, Edmonson MN, Rusch MC, Downing JR, Nichols KE, Bhatia S, Armstrong GT, Hudson MM, Zhang J, Yasui Y, Robison LL. Germline mutations in BRCA2 and pediatric/adolescent non-Hodgkin's Lymphoma: a report from the St. Jude Lifetime (SJLIFE) and Childhood Cancer Survivor Study (CCSS) cohorts. American Association for Cancer Research Annual Meeting, March 2019, poster presentation.

- A1904** Richard MA, Lupo PJ, Morton LM, Yasui Y, Arnold MA, Neglia JP, Turcotte LM, Leisenring WM, Chanock SJ, Sampson JN, Armstrong GT, Robison LL, Bhatia S, Gramatges MM. A functional POT1 variant and risk of thyroid subsequent malignant neoplasm: a report from the Childhood Cancer Survivor Study. American Association for Cancer Research Annual Meeting, March 2019, poster presentation.
- A1905** Howell R, Bates J, Qi L, Hoppe B, Lee C, Smith SC, Oeffinger KC, Constine LS, Leisenring WM, Mulrooney DA, Gibson TM, Armstrong GT, Yasui Y. Effect of heart anatomy on radiation related cardiac risk in the Childhood Cancer Survivor Study. European Society for Radiotherapy & Oncology 38<sup>th</sup> Meeting, April 2019, oral presentation.
- A1906** Arsenault V, Qiu W, Liu Q, Yeh J, Leisenring W, Ness KK, Armstrong GT, Henderson TO, Walsh A, Yabroff KR, Oeffinger KC, Hudson MM, Yasui Y, Nathan PC. Emergency department (ED) visits and hospitalizations in survivors of childhood cancer in the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2019, submitted.
- A1907** Wang X, Chen Y, Hageman L, Singh P, Landier W, Blanco JG, Hawkins D, Ritchey AK, Ginsburg J, Winick N, Sapkota Y, Morton L, Armstrong GT, Oeffinger K, Hudson MM, Chow EJ, Robison LL, Relling MV, Bhatia S. Risk prediction of Anthracycline-related Cardiomyopathy (AC) in childhood cancer survivors (CCS): A COG-ALTE03N1 and CCSS report. American Society of Clinical Oncology Annual Meeting, June 2019, submitted.
- A1908** Friedman DN, Goodman PS, Leisenring WM, Diller LR, Cohn S, Tonorezos ES, Howell RM, Smith SA, Wolden SL, Neglia JP, Ness KK, Gibson TM, Nathan PC, Robison LL, Oeffinger KC, Armstrong GT, Sklar CA, Henderson TO. Long term morbidity and mortality among survivors of infant neuroblastoma: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2019, submitted.
- A1909** Dieffenbach BV, Li N, Madenci AL, Barnea D, Murphy AJ, Tonorezos ES, Gibson TM, Liu Q, Yasui Y, Leisenring WM, Howell RM, Diller LR, Armstrong GT, Oeffinger KC, Weldon CB, Weil BR. Late cholecystectomy in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2019, submitted; North American Symposium on Late Complications after Childhood Cancer, June 2019, submitted.
- A1910** Dixon SB, Chen Y, Yasui Y, Pui C, Hunger S, Silverman L, Green D, Kadan-Lottick N, Ness KK, Leisenring W, Howell RM, Oeffinger K, Neglia J, Krull KR, Hudson MM, Robison LL, Mertens A, Armstrong GT, Nathan P. Chronic health conditions (CHC) and late mortality in survivors of Acute Lymphoblastic Leukemia (ALL) in the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2019, submitted.
- A1911** Ehrhardt MJ, Ward ZJ, Liu Q, Chaudhry A, Nohria A, Border W, Robison LL, Armstrong GT, Yasui Y, Hudson MM, Diller LR, Armenian SH, Yeh JM. Cost-effectiveness of screening guidelines to prevent heart failure in childhood cancer survivors: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2019, submitted.
- A1912** Fidler MM, Oeffinger KC, Yasui Y, Winter DL, Leisenring W, Robison LL, Reulen RC, Chen Y, Armstrong GT, Hawkins MM. Comparing late mortality risks among childhood cancer survivors: a report from the Childhood Cancer Survivor Study and British Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2019, submitted; North American Symposium on Late Complications after Childhood Cancer, June 2019, submitted.
- A1913** Hayek S, Gibson TM, Leisenring WM, Guida JL, Gramatges MM, Lupo PJ, Howell RM, Oeffinger KC, Bhatia S, Edelstein K, Hudson MM, Robison LL, Nathan PC, Yasui Y, Krull KR, Armstrong GT, Ness KK. Frailty among childhood cancer survivors: A report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2019, submitted.
- A1914** Hesko C, Liu W, Srivastava D, Brinkman TM, Diller L, Gibson TM, Oeffinger KC, Leisenring W, Howell RM, Armstrong GT, Krull KR, Henderson TO. Neurocognitive outcomes in adult survivors of neuroblastoma: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2019, submitted; North American Symposium on Late Complications after Childhood Cancer, June 2019, submitted.
- A1915** Hingorani P, Wang M, Srivastava K, Nathan P, Oeffinger K, Yasui Y, Leisenring W, Howell R, Mueller E, Gibson T, Wolden S, Bjornard K, Meyer WH, Arndt C, Robison LL, Green D, Armstrong GT, Ness KK. Temporal trends among survivors of rhabdomyosarcoma: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2019, submitted.
- A1916** Morton LM, Karyadi DM, Hartley S, Frone M, Sampson JN, Howell R, Neglia JP, Arnold MA, Dagnall CL, Hicks B, Jones K, Zhu B, Leisenring WM, Yasui Y, Berrington de González A, Bhatia S, Robison LL, Tucker MA, Armstrong GT, Chanock SJ. Subsequent neoplasm risk associated with rare variants in DNA repair and clinical radiation sensitivity syndrome genes: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2019, submitted; North American Symposium on Late Complications after Childhood Cancer, June 2019, submitted.
- A1917** Moskowitz CS, Chou JF, Ronckers CM, Smith SA, Novetsky Friedman D, Barnea D, Wolden SL, Henderson To, van der Pal HJH, Kremer LCM, Turcotte LM, Howell RM, Arnold MA, Leisenring WM, Begg CB, Robison LL, Pike MC, Armstrong GT, van Leeuwen FE, Oeffinger KC. Predicting breast cancer risk in childhood cancer survivors treated with chest radiation: a report from the Childhood Cancer Survivor Study (CCSS), and the Dutch Hodgkin Late Effects and DCOG-LATER Cohorts. American Society of Clinical Oncology Annual Meeting, June 2019, submitted.

- A1918** Mulrooney DA, Hyun G, Ness KK, Ehrhardt MJ, Yasui Y, Duprez DA, Howell R, Leisenring WM, Constone LS, Oeffinger KC, Gibson TM, Tonorez E, Robison LL, Hudson MM, Armstrong GT. Reduction in cardiac events for survivors of childhood cancer treated in more recent eras: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2019, submitted; North American Symposium on Late Complications after Childhood Cancer, June 2019, submitted.
- A1919** Sapkota Y, Liu Q, Shelton K, Wang X, Wilson CL, Wang Z, Mulrooney DM, Jefferies JL, Oeffinger KC, Morton LM, Zhang J, Armstrong GT, Bhatia S, Hudson MM, Robison LL, Yasui Y. Genome-wide association study using whole-genome sequencing identifies a novel locus associated with increased risk of cardiomyopathy in adult survivors of childhood cancer: utility of a 2-stage analytic approach. American Society of Clinical Oncology Annual Meeting, June 2019, submitted; North American Symposium on Late Complications after Childhood Cancer, June 2019, submitted.
- A1920** Veiga LH, Curtis RE, Morton LM, Withrow DR, Howell RM, Smith SA, Weathers RE, Oeffinger KC, Moskowitz CS, Henderson TO, Arnold MA, Gibson TM, Leisenring WM, Neglia JP, Turcotte LM, Whitton JA, Robison LL, Armstrong GT, Inskip PD, Berrington de Gonzalez A. Combined effect of radiotherapy and anthracyclines on risk of breast cancer risk among female childhood cancer survivors: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2019, submitted.
- A1921** Wang Z, Liu Q, Wilson CL, Sapkota Y, Gibson T, Morton LM, Sampson J, Neglia J, Arnold MA, Rusch MC, Mulder H, Easton J, Zhang J, Downing JR, Bhatia S, Armstrong GT, Chetailly W, MD1, Hudson MM, Robison LL, Yasui Y. Polygenic risk of subsequent thyroid cancer after childhood cancer: a report from St. Jude Lifetime Cohort (SJLIFE) and Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2019, submitted.
- A1922** Yeh JM, Lowry K, Schechter C, Diller LR, Alagoz O, Armstrong GT, Hampton JM, Leisenring W, Liu Q, Mandelblatt J, Miglioretti DL, Moskowitz C, Oeffinger KC, Trentham-Dietz A, Stout NK. Clinical outcomes and cost-effectiveness of breast cancer screening for childhood cancer survivors treated with chest radiation: a comparative modeling study. American Society of Clinical Oncology Annual Meeting, June 2019, submitted.
- A1923** Bashore L, Li C, Merchant Z, McDonald AJ, Lupo PJ, King A, Hamby T, Srivastava D, Leisenring WM, Howell RM, Gibson TM, Oeffinger KC, Armstrong GT, Bowman WP, Krull KR. Educational attainment in long-term survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). North American Symposium on Late Complications after Childhood Cancer, June 2019, submitted.
- A1924** Gilleland-Marchak J, Seidel KD, Ritenour CWM, Leisenring W, Mertens AC, Sklar CA, Ford J, Krull KR, Stovall M, Robison LL, Armstrong GT, Meacham LR. Sexual functioning among male survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). North American Symposium on Late Complications after Childhood Cancer, June 2019, submitted.
- A1925** Kamdar KY, Richard MA, Brown AL, Arroyo VM, Belmont JW, Scheurer ME, Foster KL, Kern KD, Hudson MM, Leisenring WM, Okcu MF, Yasui Y, Morton LM, Chanock SJ, Robison LL, Armstrong GT, Bhatia S, Oeffinger KC, Lupo PJ. A genome-wide association study (GWAS) of body mass index (BMI) in adult survivors of childhood acute lymphoblastic leukemia (ALL): A report from the Childhood Cancer Survivor Study (CCSS) and St. Jude Lifetime Cohort (SJLIFE). North American Symposium on Late Complications after Childhood Cancer, June 2019, submitted.
- A1926** Madenci AL, Dieffenbach BV, Liu Q, Yoneoka D, Knell J, Gibson TM, Yasui Y, Leisenring WM, Howell RM, Diller LR, Krull KR, Armstrong GT, Oeffinger KC, Murphy AJ, Weil BR, Weldon CB. Late-onset anorectal disease and psychosocial impact in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. North American Symposium on Late Complications after Childhood Cancer, June 2019, submitted.
- A1927** Rathore N, Richard M, Armstrong G, Brown A, Friedman D, Hanis C, Kamdar K, Leisenring W, Machiela M, Meacham L, Morton L, Mostoufi-Moab S, Chanock S, Oeffinger K, Robison L, Scheet P, Sklar C, Yasui Y, Bhatia S, Lupo P. Population-based genetic risk loci and the risk for diabetes mellitus in the Childhood Cancer Survivor Study (CCSS). North American Symposium on Late Complications after Childhood Cancer, June 2019, submitted.
- A1928** Weinstein AG, Henrich CC, Armstrong GT, Stratton KL, Leisenring WM, Krull KR. Positive psychological outcomes for pediatric cancer survivors: A report from the Childhood Cancer Survivor Study (CCSS). North American Symposium on Late Complications after Childhood Cancer, June 2019, submitted.
- A1929** Clark RA, Vu NK, Lu Z, Yasui Y, Mostoufi-Moab S, Sklar C, Howell R, Hudson MM, Gibson T, Oeffinger KC, Armstrong GT, Nathan P, Yuan Y. Predicting acute ovarian failure in female childhood cancer survivors: a report from the Childhood Cancer Survivor Study (CCSS). North American Symposium on Late Complications after Childhood Cancer, June 2019, submitted.
- A1930** van der Plas E, Qiu W, Nieman B, Yasui Y, Liu Q, Dixon S, Kadan-Lottick N, Jacola L, Gibson T, Leisenring W, Oeffinger K, Hudson M, Robison L, Armstrong GT, Krull KR. Associations between chemotherapy exposures, chronic conditions and neurocognitive impairments in pediatric ALL survivors treated with chemotherapy only vary with sex: a report from the Childhood Cancer Survivor Study (CCSS). North American Symposium on Late Complications after Childhood Cancer, June 2019, poster presentation.
- A1931** Ehrhardt MJ, Chen Y, Sandlund JT, Bluhm EC, Hayashi RJ, Bechtel K, Leisenring WM, Metzger ML, Ness KK, Krull KR, Oeffinger KC, Gibson TM, Cairo MS, Gross TG, Robison LL, Armstrong GT, Yasui Y, Hudson MM, Mulrooney DA. Late health outcomes following contemporary Lymphome Malin de Burkitt therapy for mature B-cell non-Hodgkin lymphoma: a report from the Childhood Cancer Survivor Study. North American Symposium on Late Complications after Childhood Cancer, June 2019, poster presentation.



**A1801** Lupo PJ, Morton LM, Yasui Y, Leisenring WM, Armstrong GT, Robison LL, Bhatia S, Gramatges MM. Telomere length-associated genetic variants and the risk of thyroid cancer after childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Association for Cancer Research Annual Meeting, April 2018, poster presentation.

**A1802** Lupo PJ, Morimoto L, Karlins E, Shao X, Morton LM, Scheurer ME, Bhatia S, Robison LL, Armstrong GT, Hettmer S, Khan J, Chanock SJ, Freedman ND, Wyatt K, Hicks BD, Dangall CL, Li SA, Yeager M, Skapek SX, Hawkins DS, Metayer C, Mirabello L. A genome-wide scan identifies a new locus association with pediatric rhabdomyosarcoma. American Association for Cancer Research Annual Meeting, April 2018, oral presentation.

**A1803** Machiela MJ, Grünwald TGP, Surdez D, Reynaud S, Mirabeau O, Karlins E, Rubio RA, Zaidi S, Grossetete-Lalami, Ballet S, Lapouble E, Laurence V, Michon J, Pierron G, Kovar H, Gaspar N, Kontny U, González-Neira A, Picci P, Alonso J, Patino-Garcia A, Corradini N, Freedman ND, Rothman N, Dangall CL, Burdett L, Jones K, Manning M, Wyatt K, Zhou W, Yeager M, Cox DG, Hoover RN, Khan J, Armstrong GT, Leisenring WM, Bhatia S, Robison LL, Dirksen U, Metzler M, Hartmann W, Strauch K, Kirchner T, Kulozik AE, Morton LM, Mirabello L, Tucker MA, Tirode F, Chanock SJ, Delattre O. Multiple new susceptibility loci identified in genome-wide association study of Ewing sarcoma. American Association for Cancer Research Annual Meeting, April 2018, oral presentation.

**A1804** Stefanski K, Anixt J, Goodman P, Bowers K, Leisenring W, Baker S, Burns K, Howell R, Davies S, Armstrong GT, Krull K, Recklitis C. Neurocognitive, emotional, and quality of life outcomes in survivors of pediatric acute myeloid leukemia: a report from the Childhood Cancer Survivor Study (CCSS). Pediatric Academic Societies Annual Meeting, May 2018, oral presentation.

**A1805** Daniel L, Wang M, Srivastava D, Schwartz L, Brinkman T, Edelstein K, Mulrooney D, Zhou E, Howell R, Gibson T, Leisenring W, Armstrong GT, Krull K. Sleep behavior patterns in adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). Associated Professional Sleep Societies Annual Meeting, June 2018, oral presentation.

**A1806** DeSisto J, Lucas JT, Donson A, Sanford B, Wu G, Armstrong GT, Arnold M, Bhatia S, Flannery P, Lemma R, Hardie L, Hoffman L, Dorris K, Lui A, Foreman N, Vibhakar R, Jones K, Allen S, Baker SJ, Merchant TE, Orr MB, Green AI. Comprehensive molecular characterization of pediatric treatment-induced glioblastoma: germline DNA repair defects as a potential etiology. 18th International Symposium on Pediatric Neuro-Oncology, June 2018, oral presentation.

**A1807** Scott JM, Li N, Liu Q, Yasui Y, Leisenring W, Nathan PC, Gibson T, Armemian SH, Nilsen TS, Oeffinger KC, Ness KK, Adams SC, Robison LL, Armstrong GT, Jones LW. Association of exercise with late mortality in adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2018, oral presentation.

**A1808** de Blank P, Li N, Ulrich N, Fisher MJ, Bhatia S, Yasui Y, Sklar C, Leisenring W, Howell R, Oeffinger K, Hardy K, Okcu MF, Gibson T, Robison LL, Armstrong GT, Krull K. Neurofibromatosis type 1 and risk of late outcomes after a primary tumor: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2018 poster presentation; 18th International Symposium on Pediatric Neuro-Oncology Annual Meeting, June 2018, oral presentation.

**A1809** Yan AP, Chen Y, Hudson MM, Gibson TM, Neglia P, Oeffinger KC, Leisenring WM, Ness KK, Ford J, Henderson TO, Robison LL, Armstrong GT, Yasui Y, Nathan PC. Impact of survivorship care plans (SCPs) on adherence to surveillance for second malignant neoplasms (SMNs) and cardiac dysfunction in the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2018, poster presentation.

**A1810** Dixon S, Li N, Yasui Y, Bhatia S, Casillas JN, Gibson TM, Leisenring W, Ness KK, Porter J, Robison LL, Hudson MM, Krull KR, Armstrong GT. Racial/Ethnic differences in neurocognitive, emotional and quality of life outcomes in adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2018, poster presentation.

**A1811** Friedman DN, Hilden P, Moskowitz CS, Howell R, Weathers RE, Smith SA, Wolden SL, Tonorezos ES, Mostoufi-Moab S, Chow EJ, Meacham LR, Whitton JA, Leisenring WM, Robison LL, Armstrong GT, Oeffinger KC, Sklar CA. Radiation dose and volume to the pancreas and subsequent risk of diabetes mellitus: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2018, poster presentation.

**A1812** Tonorezos ES, Ford JS, Wang L, Ness KK, Yasui Y, Leisenring W, Sklar CA, Robison LL, Oeffinger KC, Nathan PC, Armstrong GT, Krull K, Jones LW. Impact of exercise on psychological burden, quality of life, and cognitive dysfunction in adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2018, oral presentation.



- A1813** Moskowitz CS, Chou J, Neglia JP, Howell RM, Diller LR, Partridge AH, Leisenring WL, Armstrong GT, Robison LL, Oeffinger KC, Henderson TO. Mortality following breast cancer in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2018, oral presentation.
- A1814** Turcotte L, Liu Q, Yasui Y, Henderson TO, Gibson T, Leisenring WM, Arnold M, Howell R, Green D, Armstrong GT, Robison LL, Neglia J. Subsequent malignant neoplasms (SMNs) among non-irradiated survivors of childhood cancer treated with chemotherapy in the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2018, oral presentation.
- A1815** Huang IC, Ehrhardt MJ, Li C, Mulrooney DA, Chemaitilly W, Srivastava D, Armstrong GT, Robison LL, Hudson MM, Krull KR. Longitudinal assessment of patient-reported cumulative symptom burden as an indicator of chronic health conditions in adult survivors of childhood cancer: a joint report of the St. Jude Lifetime Cohort (SJLIFE) and the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2018, poster presentation; International Society for Quality of Life Research Annual Conference, October 2018, oral presentation.
- A1816** Vuotto SC, Krull KR, Li C, Okcu F, Bowers DC, Ullrich NJ, Srivastava D, Howell R, Gibson TM, Leisenring WM, Oeffinger KC, Robison LL, Armstrong GT, Brinkman TM. Neurologic morbidities, emotional distress, and functional independence in adult survivors of childhood cancer treated with CNS-directed therapies: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2018, poster presentation.
- A1817** Karlson CW, Alberts NM, Liu W, Brinkman TM, Annett R, Mulrooney DA, Schulte F, Leisenring W, Gibson TM, Howell RM, Srivastava D, Oeffinger KC, Armstrong GT, Zeltzer LK, Krull KR. Chronic pain and disability in long-term survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2018, poster presentation.
- A1818** Oeffinger KC, Stratton K, Hudson MM, Leisenring WM, Howell WM, Wolden SL, Constine LS, Diller L, Henderson TO, Sklar CA, Nathan PC, Castellino SM, Smith SA, Armstrong GT, Robison LL. Risk-adapted therapy for pediatric Hodgkin lymphoma (HL) results in lower risk of late effects: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2018, oral presentation.
- A1819** Lucas JT, DeSisto J, Donson A, Sanford B, Wu G, Armstrong GT, Arnold M, Bhatia S, Flannery P, Lemma R, Hardie L, Hoffman L, Dorris K, Liu A, Foreman N, Vibhakkar R, Jones K, Allen S, Baker SJ, Merchant TE, Green AL, Orr BA. Pediatric treatment-included high-grade gliomas are enriched for a specific methylation subgroup and recurrent genomic abnormalities. American Association of Neuropathologists (AANP) Meeting, June 2018, oral presentation.
- A1820** Cheung YT, Liu W, Brinkman TM, Srivastava D, Leisenring WM, Howell RM, Ullrich NJ, Lommel KM, Brouwers P, Gibson TM, Robison LL, Armstrong GT, Krull KR. Prevalence of prescription psychoactive medication use in adolescent survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). Multinational Association of Supportive Care in Cancer Annual Meeting, June 2018, oral presentation.
- A1821** Daniel L, Wang M, Srivastava D, Schwartz L, Brinkman T, Edelstein K, Mulrooney D, Zhou E, Howell R, Gibson T, Leisenring W, Armstrong GT, Krull K. Sleep behaviors and patterns in adult survivors of childhood cancers: a report from the Childhood Cancer Survivor Study (CCSS). Associated Professional Sleep Societies Annual Meeting, June 2018, oral presentation.
- A1822** Schonfeld SJ, Howell RM, Smith SA, Neglia JP, Turcotte LM, Arnold MA, Inskip PD, Oeffinger KC, Moskowitz CS, Henderson TO, Leisenring WM, Gibson TM, Berrington de González A, Sampson JN, Chanock SJ, Tucker MA, Bhatia S, Robison LL, Armstrong GT, Morton LM. Comparison of radiation dose reconstruction methods to investigate late adverse effects of radiotherapy for childhood cancer: A report from the Childhood Cancer Survivor Study. Conference on Radiation and Health Annual Meeting, September, 2018, poster presentation.
- A1823** Schulte F, Brinkman T, Li C, Fay-McClymont T, Srivastava D, Ness KK, Howell R, Mueller S, Wells E, Strother D, Lafey-Cousin L, Leisenring W, Robison LL, Armstrong GT, Krull KR. Social adjustment in adolescent survivors of pediatric CNS tumors: a report from the Childhood Cancer Survivor Study. International Society of Paediatric Oncology Annual Meeting, November 2018, oral presentation.
- A1824** Lupo PJ, Brown AL, Arroyo VM, Belmont JW, Scheurer ME, Foster KL, Kern KD, Leisenring WM, Okcu MF, Yasui Y, Morton LM, Chanock SJ, Robison LL, Armstrong GT, Bhatia S, Oeffinger KC, Kamdar KY. Genome-wide association study to identify obesity susceptibility loci in survivors of childhood Acute Lymphoblastic Leukemia (ALL): a report from the Childhood Cancer Survivor Study (CCSS). International Society of Paediatric Oncology Annual Meeting, November 2018, oral presentation.
- A1825** Brown AL, Seidel KD, Hayashi S, Lupo PJ, Henderson TO, Howell RM, Krull KR, Robison LL, Leisenring WM, Oeffinger, KC, Armstrong GT, Hayashi R. Hearing impairment among long-term survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). International Society of Paediatric Oncology Annual Meeting, November 2018, poster presentation.

**A1826** Esbenshade AJ, Friedman DL, Lu L, Oeffinger KC, Armstrong GT, Krull KR, Neglia JP, Leisenring W, Stovall M, Robison LL, Ness KK. Using the cumulative illness rating scale to characterize the burden of chronic conditions among childhood cancer survivors and to predict mortality. International Society of Paediatric Oncology Annual Meeting, November 2018, poster presentation.

**A1827** Yeh J, Ward ZJ, Liu Q, Yasui Y, Chaudhry A, Leisenring WM, Oeffinger KC, Hudson MM, Krull KR, Gibson TM, Howell R, Armstrong GT, Diller L. Projected improvement in life expectancy across three treatment decades: insights from the Childhood Cancer Survivor Study (CCSS). International Society of Paediatric Oncology Annual Meeting, November 2018, oral presentation.

**A1828** Bhatia S, Chen Y, Wong FL, Neglia JP, Arnold M, Turcotte L, de Blanc P, Armstrong GT, Robison LL, Clapp DW, Shannon K, Nakamura J, Fisher M. Risk of subsequent neoplasms (SNs) after a primary tumor in patients with NF1. Joint Global Neurofibromatosis Annual Conference, November 2018, oral presentation.

**A1829** de Blank P, Li N, Fisher M, Ullrich N, Bhatia S, Yasui Y, Sklar C, Leisenring W, Howell R, Oeffinger K, Hardy K, Okcu MF, Gibson T, Robison LL, Armstrong GT, Krull K. Risk of psychological, cognitive and health impairments in adult survivors of childhood glioma with neurofibromatosis type 1. Joint Global Neurofibromatosis Annual Conference, November 2018, oral presentation.

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**A1701** Tonorezos ES, Meacham L, Chou J, Moskowitz CS, Leisenring WM, Friedman DN, Sklar CA, Dilley KJ, Hudson M, Mertens A, Armstrong GT, Robison LL, Oeffinger KC. Increased late mortality in underweight survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. ASCO Survivorship Symposium, January 2017, poster presentation.

**A1702** Weil B, Madenci A, Liu Q, Gibson T, Yasui Y, Neglia J, Leisenring W, Howell R, Tonorezos E, Friedman D, Tinkle C, Diller L, Armstrong GT, Oeffinger K, Weldon C. Infection related late mortality in survivors of childhood cancer with asplenia or radiation-induced hyposplenism: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2017, poster presentation; 15th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2017, oral presentation.

**A1703** Madenci AL, Weil BR, Liu Q, Gibson TM, Yasui Y, Leisenring WM, Howell RM, Tinkle C, Nekhlyudov L, Diller L, Armstrong GT, Oeffinger KC, Weldon CB. Long-term incidence of venous thromboembolism (VTE) among survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2017, poster presentation; 15th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2017, poster presentation.

**A1704** Gibson TM, Mostoufi-Moab S, Stratton K, Barnea D, Chow EJ, Donaldson SS, Howell R, Hudson MM, Leisenring WM, Mahajan A, Nathan PC, Ness KK, Sklar CA, Tonorezos ES, Weldon CB, Wells EM, Yasui Y, Armstrong GT, Robison LL, Oeffinger KC. Temporal trends in chronic disease among survivors of childhood cancer diagnosed across three decades: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2017, oral presentation; 15th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2017, oral presentation.

**A1705** Bates JE, Liu Q, Yasui Y, Howell RM, Mulrooney DA, Dhakal S, Leisenring WM, Indelicato DJ, Gibson TM, Armstrong GT, Oeffinger KC, Constine LS. Age-associated vulnerability to treatment-related late cardiotoxicity: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2017, oral presentation.

**A1706** Salloum R, Chen Y, Yasui Y, Packer R, Leisenring W, Wells E, King A, Howell R, Gibson TM, Krull KR, Robison LL, Oeffinger KC, Fouladi M, Armstrong GT. Temporal trends in late-onset morbidity and mortality after medulloblastoma diagnosed across three decades: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2017, oral presentation.

**A1707** Henderson TO, Nathan PC, Whitton J, Leisenring W, Neglia J, Fowler B, Arnold MA, Howell RM, Robison LL, Armstrong GT, Alexander K. Human papillomavirus (HPV)-associated malignancies as subsequent malignant neoplasms (SMN) in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2017, poster presentation; 15th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2017, poster presentation.

**A1708** Brooke RJ, Chemaitilly W, Wilson CL, Krasin MJ, Li Z, Im C, Morton LM, Wu G, Wang Z, Chen W, Howell RM, Armstrong GT, Bhatia S, Chanock SJ, Zhang J, Green DM, Sklar CA, Hudson MM, Robison LL, Yasui Y. A high-risk genetic profile for premature menopause (PM) in childhood cancer survivors (CCS) exposed to gonadotoxic therapy: a report from the St. Jude Lifetime Cohort (SJLIFE) and Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2017, oral presentation; 15th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2017, oral presentation.

**A1709** Dietz AC, Seidel K, Leisenring WM, Mulrooney DA, Tersak JM, Glick RD, Burnweit CA, Green DM, Diller L, Oeffinger KC, Smith SA, Howell RM, Stovall M, Robison LL, Armstrong GT, Termuhlen AM. Solid organ transplant after treatment for childhood cancer: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology, June 2017, poster presentation; 15th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2017, oral presentation.

**A1710** Feijen EA, Leisenring WM, Stratton KL, Ness KK, Van der Pal HJH, van Dalen EC, Armstrong GT, Aune GJ, Green DM, Hudson MM, Loonen J, Oeffinger KC, Robison LL, Yasui Y, Kremer LC, Chow EJ. Equivalence ratios for late cardiomyopathy after doxorubicin and other anthracyclines/anthraquinones. 15th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2017, oral presentation.

**A1711** Huang I, Hyun G, Gibson TM, Yasui Y, Leisenring W, Armstrong GT, Hudson MM, Robison LL, Krull KR. The Impact of administration modes on patient-reported outcome survey: a report from the Childhood Cancer Survivor Study (CCSS). 15th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2017, poster presentation.

**A1712** Lupo PJ, Brown AL, Kamdar KY, Belmont JW, Armstrong GT, Leisenring WM, Oeffinger KC, Okcu F, Robison LL, Scheurer ME, Yasui Y, Bhatia S. DNA methylation and obesity in survivors of pediatric Acute Lymphoblastic Leukemia (ALL): a report from the Childhood Cancer Survivor Study (CCSS). 15th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2017, poster presentation.

**A1713** Moskowitz CS, Chou JF, Sklar CA, Barnea D, Ronckers CM, Friedman DN, Neglia JP, Turcotte L, Howell RM, Henderson TO, Armstrong GT, Leisenring WM, Robison LL, van Leeuwen FE, Pike MC, Oeffinger KC. Radiation-associated breast cancer and hormone exposure: a report from the Childhood Cancer Survivor Study (CCSS). 15th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2017, oral presentation.

**A1714** Zheng DJ, Krull KR, Chen Y, Diller L, Yasui Y, Brouwers P, Howell R, Lai JS, Balsamo L, Oeffinger KC, Robison LL, Armstrong GT, Kadan-Lottick NS. Long-term psychological outcomes in survivors of neuroblastoma: a report from the Childhood Cancer Survivor Study. 15th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2017, oral presentation.

**A1715** Morton LM, Veiga L, Curtis RE, Withrow D, Inskip PD, Oeffinger KC, Moskowitz CS, Neglia JP, Turcotte LM, Howell R, Weathers RE, Smith SA, Henderson TO, Leisenring WM, Whitton JA, Gibson TM, Robison LL, Armstrong GT, Berrington A. Risk of subsequent breast cancer after radiotherapy according to hormone-receptor status: a nested case-control study in Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2017, poster presentation.

**A1716** Foster RH, Hayashi R, Liu W, Mohrmann C, Howell RM, Smith SA, Gibson TM, Srivastava DK, Green DM, Oeffinger KC, Leisenring WM, Robison LL, Armstrong GT, Krull KR, Hardy KK. Social outcomes among adolescent long-term survivors of Wilms tumor: a report from the Childhood Cancer Survivor Study. International Society of Paediatric Oncology Annual Meeting, October 2017, oral presentation.

**A1717** Foster RH, Hayashi R, Wang M, Liu W, Mohrmann C, Howell RM, Smith S, Gibson TM, Srivastava K, Green DM, Oeffinger K, Leisenring W, Robison LL, Armstrong GT, Krull K, Hardy KK. Psychological and educational outcomes among adolescent survivors of Wilms tumor: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology, June 2017, poster presentation; 15th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2017, poster presentation.

**A1718** Tonorezos ES, Meacham L, Chou JF, Moskowitz CS, Leisenring WM, Freidman D, Sklar CA, Dilley KJ, Hudson M, Mertens A, Armstrong GT, Robison LL, Oeffinger KC. Risk of increased mortality in underweight survivors: a report from the Childhood Cancer Survivor Study. 15th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2017, oral presentation.

**A1719** Bates JE, Howell RM, Liu Q, Yasui Y, Mulrooney DA, Dhakal S, Leisenring WM, Indelicato DJ, Gibson TM, Armstrong GT, Oeffinger KC, Constine LS. Volumetric dose-effect analysis of late cardiotoxicity: a report from the Childhood Cancer Survivor Study (CCSS). American Society for Radiation Oncology Annual Meeting, oral presentation, September 2017.

**A1720** Mueller S, Chen Y, Yasui Y, Fullerton HJ, Howell R, Oeffinger K, Robison LL, Armstrong GT, Krull KR. Impact of stroke and stroke recurrence on late mortality as well as psychological and socioeconomic outcomes in childhood cancer survivors. Pediatric Neuro-Oncology Basic and Translational Research Conference, June 2017, poster presentation.

## 2016

**A1601** Vuotto SC, Brinkman TM, Li C, Lown A, Marchak JG, Srivastava D, Nathan PC, Robison LL, Armstrong GT, Krull KR. The impact of alcohol consumption on neurocognitive dysfunction in adult survivors of childhood cancer. 44<sup>th</sup> International Neuropsychological Society Annual Meeting, February 2016, oral presentation.

**A1602** Fair D, Kirchhoff AC, Nipp P, Leisenring W, Oeffinger K, Armstrong GT, Robison LL, Park E. How costs of healthcare affect utilization in the Childhood Cancer Survivor Study. ASCO Cancer Survivorship Symposium, January 2016, poster presentation.

**A1603** Keske R, Armstrong GT, Davine J, McDonald A, Gibson T, Daniel C, Mertens A, Marghoob A, Geller A. Advancing Survivors' Knowledge (ASK) About Skin Cancer Study: a randomized intervention within the Childhood Cancer Survivor Study (CCSS). ASCO Cancer Survivorship Symposium, January 2016, poster presentation.

**A1604** D'Agostino N, Edelstein K, Zhang N, Recklitis C, Srivastava K, Leisenring W, Robison LL, Armstrong GT, Krull KR. Predicting patterns of distress in adult survivors of childhood cancer: a latent profile analysis from the Childhood Cancer Survivor Study. ASCO Cancer Survivorship Symposium, January 2016, poster presentation.

**A1605** Morton LM, Sampson JN, Armstrong GT, Chen T, Hudson MM, Karlins E, Dagnall CL, Li S, Wilson CL, Srivastava K, Liu W, Kang G, Oeffinger KC, Henderson TO, Moskowitz CS, Gibson TM, Merino DM, Wong JR, Hammond S, Neglia JP, Turcotte LM, Miller J, Bowen L, Wheeler WA, Leisenring WM, Whitton JA, Burdette L, Chung C, Hicks BD, Jones K, Machiela MJ, Vogt A, Wang Z, Yeager M, Neale G, Lear M, Strong LC, Yasui Y, Stovall M, Weathers RE, Smith SA, Howell R, Davies SM, Radloff GA, Berrington de González A, Inskip PD, Rajaraman P, Fraumeni JF Jr., Bhatia S, Chanock SJ, Tucker MA, Robison LL. Genome-wide association study identifies two susceptibility loci that modify radiation-related risk for breast cancer after childhood cancer: a report from the Childhood Cancer Survivor Study and St. Jude Lifetime cohort. American Association of Cancer Research Annual Meeting, April 2016, oral presentation.

**A1606** Morton LM, Sampson JN, Bhatia S, Hudson MM, Chen TH, Neglia JP, Yasui Y, Karlins E, Dagnall CL, Gibson TM, Wilson CL, Srivastava DK, Liu W, Kang G, Weathers RE, Smith SA, Tucker MA, Robison LL, Chanock SJ, Armstrong GT. Genome-wide association study of meningioma as a subsequent neoplasm: a report from the Childhood Cancer Survivor Study (CCSS) and St. Jude Lifetime cohort (SJLIFE). American Society of Clinical Oncology Annual Meeting, June 2016, oral presentation.

**A1607** Turcotte LM, Yasui Y, Liu Q, Hammond S, Arnold MA, Howell RM, Gibson TM, Leisenring WM, Armstrong GT, Robison LL, Neglia JP. Changing patterns of subsequent malignancies in the Childhood Cancer Survivor Study cohort. American Society of Clinical Oncology Annual Meeting, June 2016, oral presentation.

**A1608** Oeffinger KC, Ford J, Moskowitz CS, Chou JF, Henderson TO, Hudson MM, Diller L, McDonald A, Ford J, Mubdi NZ, Rinehart D, Vukadinovich C, Gibson TM, Anderson N, Elkin EB, Garret K, Rebull M, Armstrong GT. The EMPOWER Study: promoting breast cancer screening: a randomized controlled trial (RCT) in the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2016, oral presentation.

**A1609** Gibson TM, Li C, Armstrong GT, Srivastava DK, Leisenring WM, Mertens A, Brinkman TM, Diller L, Nathan PC, Hudson MM, Robison LL. Patient-reported levels of concern in the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2016, poster presentation.

**A1610** Levine JM, Armstrong GT, Ginsberg J, Green DM, Leisenring WM, Robison LL, Stovall M, Whitton J, Sklar CA. Non-surgical premature menopause (NSPM) in the Childhood Cancer Survivor Study (CCSS): prevalence, risk factors, and reproductive outcomes. American Society of Clinical Oncology Annual Meeting, June 2016, oral presentation.

**A1611** Machiela MJ, Karlins E, Zhou W, Khan J, Ballet S, Lapouble E, Laurence V, Michon J, Pierron G, Mirabello L, Morton L, Armstrong GT, Robison LL, Bhatia S, Hoover R, Tucker MA, Tirode F, Delattre O, Chanock SJ. Genome-wide association study identifies new susceptibility regions associated with Ewing sarcoma risk. The American Society of Human Genetics Annual Meeting, October 2016, poster presentation.

**A1612** Moskowitz CS, Chou JF, Barnea D, Sklar CA, Leisenring WM, Neglia JP, Turcott L, Howell RM, Freidman DN, Henderson TO, Ronckers CM, van Leeuwen F, Pike MC, Armstrong GT, Oeffinger KC. Gonadal hormone exposure and radiation-associated breast cancer risk: a report from the Childhood Cancer Survivor Study. European Symposium on Late Complications after Childhood Cancer, September 2016, poster presentation.

**A1613** Turcotte L, Liu Q, Yasui Y, Hammond S, Howell R, Gibson TM, Leisenring WM, Armstrong GT, Robison LL, Neglia J. Therapeutic modifications and changing patterns of subsequent neoplasms in the Childhood Cancer Survivor Study. European Symposium on Late Complications after Childhood Cancer, September 2016, oral presentation.

**A1614** Ehrhardt MJ, Chen Y, Sandlund JT, Bluhm EC, Hayashi R, Leisenring WM, Metzger M, Ness KK, Krull KR, Oeffinger KC, Robison LL, Yasui Y, Armstrong GT, Hudson MM, Mulrooney DA. Estimated late health outcomes in children diagnosed with B-cell non-Hodgkin lymphoma treated with contemporary LMB chemotherapy: a report from the Childhood Cancer Survivor Study (CCSS). Annual American Society of Hematology, December 2016, poster presentation.

## 2015

**A1501** Park ER, Kirchhoff AC, Perez GK, Leisenring W, Weissman JS, Donelan K, Hyland K, Armstrong GT, Robison LL, Kuhlthau KA. Childhood Cancer Survivor Study participants' health insurance coverage experiences. 36th Annual Meeting & Scientific Sessions of the Society of Behavioral Medicine, April 2015, poster presentation.

**A1502** Buchbinder D, Oeffinger KC, Franco-Villalobos C, Yasui Y, Alderfer MA, Armstrong GT, Casillas J, Ford J, Krull KR, Leisenring W, Recklitis C, Robison LL, Zeltzer LK, Lown EA. Tobacco use behaviors of siblings of childhood cancer survivors: a report from the Childhood Cancer Survivor Study. 28th Annual Meeting of American Society of Pediatric Hematology/Oncology, May 2015, poster presentation.

**A1503** Gibson TM, Liu W, Armstrong GT, Srivastava K, Hudson MM, Leisenring WM, Mertens AC, Klesges RC, Oeffinger KC, Nathan PC, Robison LL. Longitudinal smoking patterns in survivors of childhood cancer: a Childhood Cancer Survivor Study (CCSS) update. American Society of Clinical Oncology Annual Meeting, June 2015, poster presentation, 14th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, poster presentation.

**A1504** Ness KK, Hudson MM, Jones KE, Leisenring WM, Stovall M, Green DM, Neglia JP, Henderson TO, Casillas J, Ford JS, Effinger KE, Oeffinger KC, Armstrong GT, Robison LL, Nathan PC. Temporal trends in health status among adults in the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2015, poster presentation, 14th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, poster discussion session.

**A1505** Bowers DC, Moskowitz CS, Chou JF, Mazewski CM, Neglia J, Armstrong GT, Leisenring WM, Robison LL, Oeffinger KC. Morbidity and Mortality associated with subsequent meningioma among Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2015, oral presentation; 14th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, oral presentation.

**A1506** D'Agostino NM, Edelstein K, Zhang N, Recklitis CJ, Brinkman TM, Srivastava DK, Leisenring WM, Robison LL, Armstrong GT, Krull KR. Patterns and predictors of psychological distress in adult survivors of childhood cancer: a Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2015, poster presentation; 14th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, poster presentation.

**A1507** Perez G, Kirchhoff A, Krull K, Leisenring W, Recklitis C, Armstrong GT, Nathan P, Robison LL, Kuhlthau K, Park E. Mental health care insurance coverage, utilization and perceived value among childhood cancer survivors: a report from the Childhood Cancer Survivor Study (CCSS). 2015 World Congress of Psycho-Oncology, July 2015, poster presentation.

**A1508** Bhatia S, Liu Q, Leisenring WM, Ness KK, Gibson TM, Robison LL, Armstrong GT, Yasui Y. Long-term outcomes by race/ethnicity in the Childhood Cancer Survivor Study (CCSS) Cohort. American Society of Clinical Oncology Annual Meeting, June 2015, poster presentation.

**A1509** Mostoufi-Moab S, Seidel K, Leisenring WM, Armstrong GT, Oeffinger KC, Green DM, Stovall M, Meacham LR, Ginsberg J, Robison LL, Sklar CA. Endocrine disorders in adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). 14th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, oral presentation.

**A1510** Mueller EL, Hutchinson R, Goodman P, Leisenring WM, Sklar CA, Hudson MM, Ness KK, Armstrong GT, Robison LL, Stovall M, Oeffinger KC, Nathan PC. Long-term risks for chronic medical conditions and premature mortality in survivors of pediatric soft tissue sarcoma: a Report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2015, oral presentation; 14th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, poster presentation.

**A1511** Brinkman, TM, Vuotto, SC, Li C, Oeffinger KC, Green DM, Patel S, Srivastava DK, Stovall M, Ness KK, Armstrong GT, Robison LL, Krull KR. Impact of chronic disease on psychological distress in adult survivors in the Childhood Cancer Survivor Study (CCSS). 14th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, oral presentation.



**A1512** Brinkman, TM, Li C, Vannatta KA, Marchak JG, Lai J, Kimberg C, Prasad PK, Di C, Srivastava DK, Robison LL, Armstrong GT, Krull KR. Emotional and behavioral phenotypes of adolescent survivors in the Childhood Cancer Survivor Study (CCSS). 14th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, poster presentation.

**A1513** Leisenring WM, Whitton J, Neglia JP, Green DM, Gibson T, Stovall M, Hudson MM, Robison LL, Armstrong GT, Yasui Y, Mertens AC. Temporal changes in treatment exposures in the Childhood Cancer Survivor Study (CCSS). 14th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, oral presentation.

**A1514** Effinger KE, Fisher PG, Ness KK, Krull K, Marina N, Stovall M, Oeffinger KC, Armstrong GT, Robison LL, Nathan PC, Leisenring WM, Hudson MM. Longitudinal Evaluation of Health Status and Chronic Conditions in Aging Pediatric Astrocytoma Survivors: A Childhood Cancer Survivor Study (CCSS) Report. American Society of Clinical Oncology Annual Meeting, June 2015, poster presentation; 14th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, oral presentation.

**A1515** Schapiro M, Hayashi R, Liu W, Srivastava DK, Jeffe D, Perkins S, Armstrong GT, Robison LL, Stovall M, Leisenring W, Krull K. Neurocognitive, emotional, and quality of life outcomes in long-term survivors of rhabdomyosarcoma: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2015, poster presentation; 14th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, poster presentation.

**A1516** Madenci AL, Fisher S, Diller L, Goldsby R, Leisenring W, Oeffinger KC, Robison LL, Sklar C, Stovall M, Weathers RE, Armstrong GT, Yasui Y, Weldon CB. Intestinal obstruction in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2015, poster presentation; 14th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, poster presentation.

**A1517** Armstrong GT, Yasui Y, Chen Y, Leisenring W, Gibson TM, Mertens A, Stovall M, Hudson MM, Oeffinger KC, Bhatia S, Krull K, Nathan PC, Neglia J, Green D, Robison LL. Reduction in late mortality among five-year survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2015, plenary session presentation; 14th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, oral presentation.

**A1518** Gilleland-Marchak J, Seidel KD, Mertens AC, Ritenour CWM, Wasilewski-Masker K, Leisenring W, Sklar CA, Ford J, Krull KR, Stovall M, Robison LL, Armstrong GT, Meacham LR. Perceptions of risk for infertility among male survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). 14th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, oral presentation.

**A1519** Daniel C, Armstrong GT, Keske R, Davine J, McDonald A, Sprunck-Harrild K, Coleman C, Haneuse S, Mertens A, Emmons K, Marghoob A, Elkin E, Dusza S, Robison LL, Gibson T, Geller A. Advancing Survivors' Knowledge (ASK) About Skin Cancer Study: a randomized intervention within the Childhood Cancer Survivor Study (CCSS). New England Cancer Survivorship Research Conference: Focus on Intervention, April 2015, poster presentation.

**A1520** de Blank P, Fisher MJ, Lu L, Leisenring WM, Ness KK, Sklar CA, Stovall M, Vukadinovich CM, Robison LL, Armstrong GT, Krull KR. The Impact of vision loss among survivors of childhood central nervous system astroglial tumors. Children's Tumor Foundation NF Conference, June 2015, oral presentation.

**A1521** Mertens A, Whitton J, Gibson TM, Stovall M, Hudson MM, Robison LL, Armstrong GT, Yasui Y, Leisenring WM, Green D. Temporal changes in treatment exposures in the Childhood Cancer Survivor Study (CCSS). Children's American Society of Clinical Oncology Annual Meeting, June 2015, poster presentation.

**A1522** Feijen EAM, Stratton KL, Ness KK, Van der Pal HJH, Caron HN, Armstrong GT, Green D, Hudson MM, Leisenring W, Oeffinger KC, Robison LL, Stovall M, Kremer LCM, Chow EJ. Equivalence ratio for daunorubicin to doxorubicin in relation to late heart failure. 14<sup>th</sup> International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, oral presentation.

**A1523** Yeh JM, Hanmer J, Ward Z, Leisenring W, Armstrong GT, Hudson M, Stovall M, Robison LL, Oeffinger K, Diller L. Health utility scores in childhood cancer survivors: insights from the Childhood Cancer Survivor Study. 37th Annual Meeting of the Society of Medical Decision Making, October 2015, oral presentation.

**A1524** Nipp RD, Kirchoff AC, Fair DB, Kuhlthau K, Hyland K, Perez GK, Armstrong GT, Nathan PC, Oeffinger KC, Leisenring WM, Park ER. Financial burden among survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. ASCO Palliative Care in Oncology Symposium, October 2015, poster presentation.

**A1525** Jacola LM, Edelstein K, Lui W, Pui CH, Hayashi R, Kadan-Lottick N, Srivastava D, Henderson T, Robison LL, Armstrong GT, Krull KR. Cognitive, behavior and academic problems in adolescent survivors of childhood acute lymphoblastic leukemia (ALL): a report from the Childhood Cancer Survivor Study. 57th American Society of Hematology Annual Meeting and Exposition, December 2015, oral presentation.

## 2014

**A1401** Effinger KE, Leisenring W, Oeffinger KC, Hudson MM, Ness KK, Marina N, Castellino SM, Stovall M, Armstrong GT, Robison LL, Sainani K, Whittemore AS. Longitudinal Evaluation of health status in aging pediatric Hodgkin lymphoma survivors: report from the Childhood Cancer Survivor Study. 2nd International Symposium on Childhood, Adolescent and Young Adult Hodgkin Lymphoma, May 2014, oral presentation.

**A1402** Zhou R, Ng A, Withers R, McDonald A, Leisenring W, Goodman P, Stovall M, Armstrong GT, Robison LL, Hodgson D. The evolution of pediatric Hodgkin lymphoma therapy: contemporary protocols significantly reduce radiation exposure of normal tissues. 2nd International Symposium on Childhood, Adolescent and Young Adult Hodgkin Lymphoma, May 2014, oral presentation.

**A1403** Suh E, Stratton KL, Ford JS, Nathan PC, Freyer DR, McNeer J, Stock W, Leisenring W, Stovall M, Krull KR, Sklar CA, Armstrong GT, Oeffinger KC, Robison LL, Henderson TO. Chronic health conditions and premature mortality in long-term survivors of cancer diagnosed between the ages of 15 and 20 years: a report from the Childhood Cancer Survivor Study. 7<sup>th</sup> Biennial Cancer Survivorship Research Conference, June 2014, poster presentation.

**A1404** Chow EJ, Chen Y, Armstrong GT, Border WL, Meacham LR, Mulrooney DA, Oeffinger KC, Sklar CA, Stovall M, Robison LL, Yasui Y. Individual risk prediction of major cardiovascular events after cancer: a Childhood Cancer Survivor Study report. American Society of Clinical Oncology Annual Meeting, May 2014, poster presentation.

**A1405** Jones LW, Liu Q, Armstrong GT, Ness KK, Yasui Y, Devine K, Tonorezos E, Soares-Miranda L, Sklar CA, Douglas PS, Robison LL, Oeffinger KC. Exercise and risk of major cardiovascular events in adult survivors of childhood Hodgkin lymphoma: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, May 2014, poster presentation, European Symposium on Late Complications after Childhood Cancer (ESLCCC), September 2014, poster presentation.

**A1406** King AA, Perkins SM, Seidel K, Di C, Leisenring WM, Krull KR, Green DM, Armstrong GT, Zelter LK, Wells E, Stovall M, Ullrich N, Oeffinger KC, Robison LL, Packer R. Health and functional status of long term adult medulloblastoma/PNET survivors: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, May 2014, poster presentation.

**A1407** Henderson TO, Moskowitz CS, Onel K, Bradbury AR, Friedman DN, Chou JF, Bhatia S, Strong LC, Neglia JP, Stovall M, Leisenring WM, Robison LL, Armstrong GT, Diller L, Oeffinger KC. Breast cancer in childhood cancer survivors not treated with chest-directed radiation in the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, May 2014, oral presentation.

**A1408** Moskowitz CS, Malhotra J, Chou JF, Wolden SL, Stovall M, Armstrong GT, Leisenring WM, Neglia JP, Robison LL, Oeffinger KC. Breast cancer following spinal radiotherapy for a childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, May 2014, poster presentation.

**A1409** Huang IC, Brinkman TM, Armstrong GT, Robison LL, Krull KR. Mediating role of emotional symptoms on assessment of health-related quality of life of adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, May 2014, poster presentation.

**A1410** Dietz AC, Chen Y, Ness KK, Hagood JS, Chow EJ, Yasui Y, Stovall M, Neglia JP, Oeffinger KC, Mertens AC, Robison LL, Armstrong GT, Mulrooney DA. Risk and Impact of pulmonary complications in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, May 2014, poster presentation, 14th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, oral presentation.

**A1411** Turcotte LM, Whitton J, Friedman DL, Hammond S, Armstrong GT, Leisenring WM, Robison LL, Neglia JP. Subsequent neoplasms in the 5th and 6th decades of life in the Childhood Cancer Survivor Study cohort. American Society of Clinical Oncology Annual Meeting, May 2014, poster presentation.

**A1412** Cox CL, Leisenring WM, Stratton KL, Steen BD, Ogg SW, Robison LL, Hudson MM. Combining eHealth and mHealth strategies to promote risk-based cardiovascular screening in adult survivors of childhood cancer. 7th Biennial Cancer Survivorship Research Conference, June 2014, oral presentation.

**A1413** Wells EM, Ullrich NJ, Seidel K, Leisenring W, Sklar C, Armstrong GT, Diller L, King A, Krull K, Neglia JP, Stovall M, Whelan K, Robison LL, Packer RJ. Neurologic sequelae in brain tumor survivors in the Childhood Cancer Survivor Study (CCSS). 16<sup>th</sup> International Symposium on Pediatric Neuro-Oncology (ISPNO), June 2014, oral presentation.

**A1414** Hudson MM, Leisenring WM, Stratton K, Tinner N, Steen B, Ogg S, Barnes L, Robison LL, Cox CL. Increasing cardiovascular screening in at-risk adult survivors of pediatric malignancies: a randomized controlled trial. American Society of Clinical Oncology Annual Meeting, May 2014, oral presentation.

**A1415** Cox C, Leisenring W, Stratton K, Steen B, Ogg S, Tinner N, Robison LL, Hudson MM. Motivating behavior change in adult survivors of childhood cancer: a randomized controlled trial (RCT) from the Childhood Cancer Survivor Study (CCSS). 142<sup>nd</sup> American Public Health Association Annual Meeting and Exposition, November 2014, oral presentation.

**A1416** Tsui K, Gajjar A, Li C, Srivastava D, Broniscer A, Wetmore C, Kun LE, Merchant TE, Ellison DW, Orr B, Boop FA, Klimo Jr P, Ross JD, Robison LL, Armstrong GT. Subsequent neoplasms in survivors of central nervous system tumors: risk after modern multi-modal therapy. 16<sup>th</sup> International Symposium on Pediatric Neuro-Oncology (ISPNO), June 2014, poster presentation.

**A1417** Feijen EAM, Stratton KL, Ness KK, Van der Pal HJH, Caron HN, Armstrong GT, Green D, Hudson MM, Leisenring W, Oeffinger KC, Robison LL, Stovall M, Kremer LCM, Chow EJ. Equivalence ratio for daunorubicin to doxorubicin in relation to late heart failure. European Symposium on Late Complications after Childhood Cancer (ESLCCC), September 2014, poster presentation.

**A1418** Ford JS, Chou JF, Moskowitz C, Candela J, Henderson TO, Nathan P, Hudson MM, Leisenring W, Robison LL, Armstrong GT, Oeffinger KC. Cancer treatment summaries and long-term childhood cancer survivors: a report from the Childhood Cancer Survivor Study. European Symposium on Late Complications after Childhood Cancer (ESLCCC), September 2014, poster presentation.

## 2013

**A1301** Kirchhoff AC, Leisenring W, Oeffinger K, Armstrong GT, Robison LL. Labor force transitions in the Childhood Cancer Survivor Study. 34<sup>th</sup> Annual Meeting & Scientific Sessions of the Society of Behavior Medicine, March 2013, poster presentation.

**A1302** Kirchhoff AC, Kuhlthau K, Leisenring W, Warner EL, Armstrong GT, Oeffinger K, Robison LL, Park ER. Childhood cancer survivors and social security benefit coverage: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Preventive Oncology, March 2013, poster presentation.

**A1303** Daniel CL, Kohler C, Nathan P, Oeffinger K, Stratton K, Leisenring W, Whelan K, Waterbor J, Henderson T, Armstrong GT, Krull K, Robison LL. Predictors of colorectal cancer screening among high-risk survivors of childhood cancer. American Society of Preventive Oncology, March 2013, oral presentation.

**A1304** Prasad PK, Hardy KK, Zhang N, Srivastava DK, Edelstein K, Zeltzer L, Stovall M, Leisenring W, Seibel NL, Armstrong GT, Robison LL, Krull KK. Psychological and Neurocognitive outcomes in survivors diagnosed with cancer as adolescents and young adults: a Report from the Childhood Cancer Survivor Study. American Society of Pediatric Hematology-Oncology, April 2013, poster presentation.

**A1305** Park ER, Kirchhoff AC, Perez-Lougee G, Leisenring W, Weissman JS, Donelan K, Mertens AC, Reschovsky J, Armstrong GT, Robison LL, Diller LR, Recklitis CJ, Kuhlthau KA. Childhood cancer survivor familiarity with the Affordable Care Act. New England Cancer Survivorship Research Conference, May 2013, poster presentation.

**A1306** Wilson CL, Leisenring WL, Oeffinger K, Nathan PC, Wasilewski-Masker K, Hudson MM, Castellino S, Stovall M, Armstrong GT, Brinkman TM, Robison LL, Ness KK. Predictors of declining levels of physical activity among adult survivors of childhood cancer. American Society of Clinical Oncology Annual Meeting, June 2013, poster presentation; 13<sup>th</sup> International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2013, poster presentation.

**A1307** Essig S, Qiaozi L, Chen Y, Hitzler J, Leisenring W, Greenberg M, Sklar C, Hudson MM, Armstrong GT, Krull K, Neglia JP, Oeffinger KC, Robison LL, Yasui Y, Nathan PC. Estimated long-term outcomes in children newly diagnosed with standard risk acute lymphoblastic leukemia (ALL) based on similarly treated members of the Childhood Cancer Survivor Study (CCSS) cohort. American Society of Clinical Oncology Annual Meeting, June 2013, poster presentation.

**A1308** Soriano S, Bashore L, Ross G, Proffitt-Leyva R, Armstrong GT, Robison LL, Bowman WP. Recruitment of an ethnically diverse population of childhood cancer survivors: a single institution experience. 13<sup>th</sup> International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2013, poster presentation.



**A1309** Gawade PL, Oeffinger KC, Sklar CA, Green DM, Krull KK, Chemaitilly W, Stovall M, Leisenring WM, Robison LL, Ness KK. Pre-pregnancy lifestyle factors, psychological distress and adverse pregnancy outcomes among female survivors in the Childhood Cancer Survivor Study (CCSS) cohort. 13<sup>th</sup> International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2013, oral presentation.

**A1310** Gramatges MM, Liu Q, Yasui Y, Okcu F, Neglia JP, Strong LC, Armstrong GT, Robison LL, Bhatia S. Telomere length and risk of second malignant neoplasms (SMNs) in survivors of childhood cancer: a Childhood Cancer Survivor Study (CCSS). 13<sup>th</sup> International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2013, oral presentation.

**A1311** Goldsby R, Raber S, Stratton K, Ablin A, Li L, Strong L, Leisenring W, Oeffinger K, Sklar C, Armstrong GT, Robison LL, Bhatia S. Long-term sequelae in survivors of childhood leukemia with Down syndrome: a matched cohort study from the Childhood Cancer Survivor Study. Congress of the International Society for Pediatric Oncology (SIOP), September 2013, poster presentation.

**A1313** Mueller S, Fullerton HJ, Stratton K, Leisenring W, Armstrong GT, Weathers RE, Stovall M, Goldsby RE, Sklar CA, Robison LL, Krull KR. Recurrent stroke risk in childhood cancer survivors. Society for Neuro-Oncology, November 2013, oral presentation.

**A1314** Van den Berg A, Cozen W, Li D, Timofeeva M, Diepstra A, Hazelet D, Delahaye-Sourdeix M, Edlund CK, Rostgaard K, Van Den Berg DJ, Glaser SL, Robison LL, Mack TM, Ghesquieres H, Salle G, Bhatia S, Strong LC, Hwang AE, Nieters A, Smedby K, de Sanjose S, Cortessis VK, Lightfoot T, Roman E, Becker N, Foretova L, Benavente Y, Maynadie M, Visser L, Veenstra RN, Staines A, Cocco PL, Boffetta P, Kiemeny L, Lake A, Montgomery D, Slager SL, Cerhan JR, Gallagher A, Taylor GM, Brennan P, Conti DV, Coetzee GA, Onel K&, Jarrett RF, Hjalgrim H, McKay JD. TCF3/E2A (19p13.3) is a novel Hodgkin lymphoma susceptibility locus: a meta-GWAS study from the Interlymph Hodgkin lymphoma consortium. 9<sup>th</sup> International Symposium on Hodgkin Lymphoma, October 2013, oral presentation.

**A1315** Cox CL, Nolan V, Leisenring W, Yasui Y, Ogg S, Neglia J, Ness K, Robison LL. Health perceptions, behavior, and medical care utilization: Links to mortality in adult survivors of childhood cancer. American Public Health Association, November 2013, oral presentation.

**A1316** Ritenour CWM, Seidel KD, Leisenring W, Mertens A, Wasilewski-Masker K, Shnorhavorian M, Sklar CA, Whitton JA, Stovall M, Constine LS, Armstrong GT, Robison LL, Meacham L. Sexual health in male childhood cancer survivors: a Report from the Childhood Cancer Survivor Study (CCSS). 13<sup>th</sup> International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2013, poster presentation; Sexual Medicine Society of North America, November 2013, poster presentation.

**A1317** Effinger KE, Leisenring W, Oeffinger KC, Hudson MM, Ness KK, Marina N, Stovall M, Armstrong GT, Robison LL, Sainani K, Whittemore AS. Longitudinal evaluation of health status in aging pediatric Hodgkin lymphoma survivors: report from the Childhood Cancer Survivor Study. American Society of Hematology-Oncology, December 2013, oral presentation.

## 2012

**A1201** Mueller S, Fullerton HJ, Stratton K, Leisenring W, Weathers R, Stovall M, Armstrong GT, Goldsby RE, Packer RJ, Robison LL, Krull KR. Radiation and modifiable stroke risk factors in adult survivors of pediatric cancer: results from the Childhood Cancer Survivor Study. 2012 International Stroke Conference, February 2012, oral presentation, 12<sup>th</sup> International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2012, oral presentation.

**A1202** Wasilewski-Masker K, Seidel KD, Leisenring W, Mertens A, Shnorhavorian M, Ritenour MD, Stovall M, Green DM, Sklar CA, Armstrong GT, Robison LL, Meacham LR. Male Infertility in childhood and adolescent cancer survivors diagnosed from 1970-1986: a report from the Childhood Cancer Survivor Study. 12<sup>th</sup> International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2012, oral presentation.

**A1203** Wilson CL, Ness KK, Neglia JP, Hammond S, Leisenring W, Srivastava DK, Stovall M, Robison LL, Armstrong GT. Renal carcinoma following therapy for cancer in childhood: a report from the Childhood Cancer Survivor Study. 12<sup>th</sup> International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2012, oral presentation; American Society of Clinical Oncology Annual Meeting, June 2012.

**A1204** Chow EJ, Chen Y, Armstrong GT, Border W, Meacham L, Meeske KA, Mulrooney D, Oeffinger KC, Sklar CA, Stovall M, Robison LL, Yasui Y. Predicting future cardiovascular disease after cancer: a Childhood Cancer Survivor Study report. 12<sup>th</sup> International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2012.

**A1205** Shnorhavorian M, Leisenring W, Goodman P, Friedman D, Stovall M, Meacham LR, Chow E, Sklar CA, Diller L, Ferrer F, Armstrong GT, Robison LL. Genito-urinary second malignant neoplasms in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). 12th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2012, oral presentation; American Academy of Pediatrics National Conference and Exhibition, 2012.

**A1206** Wong FL, Bhatia S, Kurian Seira, Landier W, Francisco L, Leisenring W, Hudson, MM, Armstrong GT, Mertens A, Stovall M, Robison LL, Lipshultz ST, Armenian S. Cost-effectiveness of the Children's Oncology Group (COG) Long-Term Follow-Up (LTFU) guidelines in reducing the risk of congestive heart failure (CHF) in long-term childhood cancer survivors (CCS). 12th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2012, oral presentation.

**A1207** Wong FL, Bhatia S, Kurian Seira, Landier W, Francisco L, Leisenring W, Hudson, MM, Armstrong GT, Mertens A, Stovall M, Robison LL, Lipshultz ST, Armenian S. Efficacy of the Children's Oncology Group (COG) Long-Term Follow-Up (LTFU) guidelines in reducing the risk of congestive heart failure (CHF) in long-term childhood cancer survivors (CCS). American Society of Clinical Oncology Annual Meeting, June 2012, oral presentation.

**A1208** Perkins JL, Chen Y, Harris A, Sklar C, Diller L, Stovall M, Armstrong GT, Yasui Y, Robison LL. Infectious complications in survivors of childhood and adolescent cancer: a report from the Childhood Cancer Survivors Study (CCSS). 12th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2012.

**A1209** Casillas J, Liu Q, Hudson MM, Greenberg ML, Yeazel MW, Ness K, Robison LL, Armstrong GT, Leisenring W, Yasui Y, Oeffinger KC, Nathan PC. Longitudinal changes in health care utilization by adult survivors of childhood cancer in the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2012; 12th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2012, oral presentation.

**A1210** Buchbinder D, Mertens AC, Zeltzer LK, Leisenring W, Goodman P, Lown EA, Alderfer MA, Recklitis C, Oeffinger K, Armstrong GT, Hudson MM, Robison L, Casillas J. Cancer prevention and screening practices of siblings of childhood cancer survivors: a report from the Childhood Cancer Survivor Study. 12th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2012.

**A1211** Moskowitz CS, Chou JF, Wolden SL, Bernstein JL, Malhotra J, Friedman DN, Mubdi NZ, Henderson TO, Leisenring WM, Stovall M, Hammond S, Boice JD, Hudson MM, Diller LR, Bhatia S, Neglia JP, The WECARE Study Collaborative Group, Begg CB, Robison LL, Oeffinger KC. New insights into the risk of breast cancer in childhood cancer survivors treated with chest radiation: a report from the Childhood Cancer Survivor Study (CCSS) and the Women's Environmental Cancer and Radiation Epidemiology (WECARE) Study. ASCO Annual Meeting, June 2012, oral presentation; 12th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2012, oral presentation.

**A1212** Armstrong GT, Kawashima T, Leisenring W, Stovall M, Sklar CA, Robison LL, Oeffinger KC. Increasing risk of severe, life-threatening and fatal chronic health conditions in aging survivors of childhood CNS tumors: A Report from the Childhood Cancer Survivor Study. International Symposium on Pediatric Neuro-Oncology, June 2012, oral presentation.

**A1213** Wells EM, Seidel K, Ullrich NJ, Leisenring WM, Armstrong GT, Diller LR, King AA, Krull KR, Neglia JP, Stovall M, Whelan K, Sklar C, Packer RJ. Neurologic sequelae in long-term survivors of childhood brain tumors: a Childhood Cancer Survivor Study (CCSS) Update and Expanded Risk Factor Analysis. International Symposium on Pediatric Neuro-Oncology, June 2012, oral presentation.

**A1214** Armstrong GT, Kawashima T, Leisenring W, Stovall M, Sklar CA, Robison LL, Oeffinger KC. Increasing risk of chronic health conditions in aging survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. ASCO Annual Meeting, June 2012, oral presentation; 12th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2012, oral presentation.

## 2011

**A1101** Park ER, Kirchoff AC, Pandiscio BA, Armstrong GT, Robison LL, Mertens A, Recklitis C, Diller L, Kuhlthau K. Childhood Cancer Survivor Study participants' perceptions and knowledge of health insurance coverage: implications for the 2010 Health Care Reform Law. 32nd Annual Meeting & Scientific Sessions of the Society of Behavioral Medicine, April 2011, platform presentation.

**A1102** Kinahan KE, Sharp LK, Didwania A, Seidel K, Leisenring W, Lacouture ME, Stovall M, Robison LL, Krull KR, Lurie RH. Scarring, disfigurement and quality of life in long-term survivors of childhood cancer: a report from the childhood cancer survivor study. 2011 ASCO Annual Meeting, June 2011, poster presentation; 12th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2012.

**A1103** Pappo AS, Armstrong GT, Liu W, Srivastava DK, Leisenring W, Hammond S, Stovall M, Neglia JP, Robison LL. Melanoma as a subsequent neoplasm in survivors of childhood cancer: a report from the childhood cancer survivor study. 2011 ASCO Annual Meeting, June 2011, oral presentation.

**A1105** Armstrong, GT, Chen Y, Kawashima T, Sklar C, Mulroney DA, Chow E, Border W, Durand JB, Mertens A, Stovall M, Leisenring W, Yasui Y, Robison LL, Oeffinger K, Meacham L. Impact of traditional cardiovascular disease risk factors on long-term cardiovascular outcomes in adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. 2011 ASCO Annual Meeting, June 2011, oral presentation.

**A1106** Mueller S, Fullerton, HJ, Stratton K, Leisenring W, Weathers R, Stovall M, Armstrong GT, Goldsby RE, Packer RJ, Robison LL, Krull KR. Excess strong risk in adult survivors of childhood CNS tumors, leukemia and Hodgkin's lymphoma: results of the Childhood Cancer Survivor Study. 2011 Child Neurology Annual Meeting, October 2011.

**A1107** Meacham L. Longitudinal assessment of cardiovascular risk factors (CVRf) in adult survivors of pediatric cancer: a report from the childhood cancer survivor study (CCSS). 50<sup>th</sup> Annual Meeting of the European Society for Pediatric Endocrinology (ESPE), September 2011, oral presentation.

**A1108** Hudson M, Oeffinger K, Nathan P, Mertens A, Castellino S, Casillas J, Mulrooney D, Gurney J, Armstrong G, Leisenring W, Robison LL, Ness K. Longitudinal changes in health status of the Childhood Cancer Survivor cohort. Congress of the International Society for Pediatric Oncology (SIOP), October 2011, oral presentation.

**A1109** Wong FL, Bhatia S, Surian S, Landier W, Francisco L, Leisenring W, Hudson M, Armstrong GT, Mertens A, Stovall M, Yasui Y, Robison LL, Lipshultz SE, Armenian S. Evaluation of the effectiveness of the Children's Oncology Groups (COG) long-term follow-up guidelines in reducing the risk of Anthracycline-related congestive heart failure (CHF) in long-term survivors of childhood cancer. European Symposium on Late Complications after Childhood Cancer (ESLCCC), September 2011, oral presentation.

**A1110** Marina N, Hudson M, Mulrooney DA, Avedian R, Donaldson S, Fisher P, Leisenring W, Stovall M, Robison LL, Ness KK. Comparison of health status between upper and lower extremity sarcoma survivors: a report from the Childhood Cancer Survivor Study. Congress of the International Society for Pediatric Oncology (SIOP), October 2011, oral presentation.

**A1111** Klosky JL, Howell C, Li Z, Foster R, Mertens AC, Robison LL, Ness KK. Risky health behavior in adolescent survivors of childhood cancer and their siblings: a report from the Childhood Cancer Survivor Study. Congress of the International Society for Pediatric Oncology (SIOP), October 2011, oral presentation.

**A1112** Klosky JL, Hum A, Zhang N, Ali K, Srivastava DK, Klesges RC, Ness KK, Robison LL, Hudson MM. Smokeless and dual tobacco use among males surviving childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). Congress of the International Society for Pediatric Oncology (SIOP), October 2011, oral presentation.

**A1113** Cox CL, Zhu L, Steen BD, Hudson MM, Robison LL, Oeffinger KC. Survivor profiles of health-related concerns, fear and motivation predict participation in medical surveillance: the Childhood Cancer Survivor Study. American Public Health Association 139<sup>th</sup> Annual Meeting and Exposition, October 2011, platform presentation.

**A1114** Kirchhoff AC, Krull KR, Robison LL, Leisenring W. Physical, mental and neurocognitive status and employment outcomes in the Childhood Cancer Survivor Study cohort. Society for Behavioral Medicine, April 2011, oral presentation.

## 2010

**A1001** Clanton NR, Morris B, Pan Z, Mulrooney D, Jain N, Srivastava DK, Zeltzer L, Stovall M, Robison LL, Krull KR. Fatigue, vitality, sleep quality, and neurocognitive functioning in adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. International Neuropsychological Society, February 2010, platform presentation; International Society of Pediatric Oncology, October 2010, oral presentation.

**A1002** Henderson TO, Whitton J, Leisenring W, Neglia J, Meadows A, Crotty C, Oeffinger KC, Diller L, Inskip P, Stovall M, Armstrong G, Robison LL, Nathan PC. Gastrointestinal malignancies as a second malignant neoplasm in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. International Conference on Long-Term Complications of Treatment of Children and Adolescents with Cancer, 2010; American Society of Clinical Oncology Annual Meeting, June 2010, platform presentations.

**A1003** Kirchhoff AC, Krull KR, Ness KK, Park ER, Friedman DL, Armstrong GT, Stovall M, Oeffinger KC, Hudson M, Robison LL, Leisenring W. Occupational status of adult survivors of childhood cancer: a report from the Childhood Cancer Survivors Study. American Society of Preventive Oncology, March 2010, poster presentation.

**A1004** Meacham LR, Ford J, Ritenour C, Wasilewski-Masker K, Shnorhavorian M, Leisenring W, Whitton J, Armstrong G, Stovall M, Sklar C, Robison LL, Mertens A. Male health and perceptions of risk for testicular/sexual dysfunction: a report from the Childhood Cancer Survivor Study. International Conference on Long-Term Complications of Treatment of Children and Adolescents with Cancer, June 2010, poster presentation.

**A1005** Termuhlen A, Tersak J, Liu Q, Yasui Y, Stovall M, Deutsch M, Sklar CA, Robison LL, Green DM. Chronic medical conditions, health status, and health care practices at 25 years in 5-year survivors of Wilms tumor: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2010; International Conference on Long-Term Complications of Treatment of Children and Adolescents with Cancer, June 2010, platform presentations.

**A1006** Armstrong GT, Liu W, Hammond S, Bhatia S, Neglia J, Stovall M, Leisenring W, Yasui Y, Srivastava D, Robison LL. Multiple subsequent neoplasms in the Childhood Cancer Survivor Study (CCSS) cohort. American Society of Clinical Oncology Annual Meeting and International Conference on Long-Term Complications of Treatment of Children and Adolescents with Cancer, June 2010, platform presentations.

**A1007** Vrooman LM, Najita J, Goodman P, Armstrong G, Hudson M, Kenney L, Laverdière C, Leisenring W, Mody R, Nathan P, Oeffinger K, Sklar C, Diller L. Long-Term outcomes after cancer in infancy: a report from the Childhood Cancer Survivor Study (CCSS). International Conference on Long-Term Complications of Treatment of Children and Adolescents with Cancer, June 2010, platform presentation.

**A1008** Ford J, Kawashima T, Whitton J, Leisenring W, Laverdière C, Stovall M, Zeltzer L, Randolph-Frye M, Robison LL, Sklar C. Psychosexual functioning among women in the Childhood Cancer Survivor Study. International Conference on Long-Term Complications of Treatment of Children and Adolescents with Cancer, June 2010, poster presentation.

**A1009** Green DM, Nolan VG, Kawashima T, Stovall M, Donaldson SS, Sklar CA, Robison LL. Effect of hypothalamic/pituitary radiation exposure in low doses on fertility in female Childhood Cancer Survivor Study (CCSS) participants. American Society of Clinical Oncology Annual Meeting, June 2010, poster presentation.

**A1010** Green DM, Zhu L, Stovall M, Nolan V, Ness K, Donaldson SS, Cox C, Oeffinger K, Meacham LR, Sklar CA, Krull K, Armstrong GT, Robison LL. Association of antidepressant use and obesity among Childhood Cancer Survivor Study (CCSS) participants. International Conference on Long-Term Complications of Treatment of Children and Adolescents with Cancer, June 2010, poster presentation.

**A1011** Kunin-Batson A, Kadan-Lottick N, Zhu L, Bordes V, Srivastava DK, Zeltzer L, Robison LL, Krull KR. Predictors of independent living status in adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting June 2010, poster presentation.

**A1013** Bhatti P, Veiga LHS, Ronckers CM, Sigurdson AJ, Stovall M, Smith SA, Weathers R, Leisenring W, Mertens AC, Hammond S, Friedman DL, Neglia JP, Meadows AT, Donaldson SS, Sklar CA, Robison LL, Inskip PD. Radiotherapy for childhood cancer and risk of thyroid cancer in a large cohort study. SER, June 2010, submitted.

**A1014** Goldsby R, Chen Y, Yasui Y, Raber S, Li L, Diefenbach K, Shnorhavorian M, Kadan-Lottick N, Kastrinos F, Stovall M, Oeffinger K, Diller L, Armstrong GT, Robison LL, Sklar C. Late gastrointestinal sequelae in adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. International Society of Pediatric Oncology, October 2010, oral presentation.

**A1015** Brackett J, Krull K, Scheurer M, Liu W, Srivastava K, Stovall M, Merchant T, Packer R, Robison LL, Ocku MF. Antioxidant enzyme polymorphisms and neuropsychological outcomes in Medulloblastoma survivors: a report from the Childhood Cancer Survivor Study. International Society of Pediatric Oncology, October 2010, poster presentation.

**A1016** Kunin-Batson A, Kadan-Lottick N, Zhu L, Cox C, Border V, Srivastava DK, Zeltzer L, Robison LL, Krull KR. Predictors of independent living after childhood cancer: a report from the Childhood Cancer Survivor Study. International Society of Pediatric Oncology, October 2010, oral presentation.

**A1017** Best T, Skol AD, Gamazon E, Onel K. A functional analysis of variants associated with therapy-induced second malignancies after Hodgkin lymphoma identified by genome-wide scan. 52<sup>nd</sup> American Society of Hematology Annual Meeting and Exposition, December 2010, poster.

**A1018** Cozen W, Li D, Best T, Van Den Berg D, Skol AD, Cortessis VK, Mack TM, Glaser SL, Schumacher G, Weiss LM, Nathwani BN, Edlund CK, Hwang A, Bhatia S, Strong LC, Robison LL, Conti DV, Onel K. A Meta-analysis of nodular sclerosis Hodgkin lymphoma identifies risk Loci at 6p21.32. 52<sup>nd</sup> American Society of Hematology Annual Meeting and Exposition, December 2010, poster.

**A1019** Cozen W, Li D, Best T, Van Den Berg D, Skol AD, Cortessis VK, Mack TM, Glaser SL, Schumacher G, Weiss LM, Nathwani BN, Edlund CK, Hwang A, Bhatia S, Strong LC, Robison LL, Conti DV, Onel K. A Meta-analysis of nodular sclerosis Hodgkin lymphoma identifies risk Loci at 6p21. 32<sup>nd</sup> International Lymphoma Epidemiology Consortium, April 2010, oral presentation.

## 2009

**A0901** Nathan PC, Ness KK, Hudson MM, Mahoney M, Ford JS, Landier W, Armstrong GT, Henderson T, Robison LL, Oeffinger KC. Cancer screening in adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2009, platform presentation.

**A0902** Boukheris H, Neglia JP, Stovall M, Hammond S, Mertens AC, Meadows AT, Donaldson SS,

Armstrong GT, Stratton KL, Robison LL, Inskip PD. Risk of salivary gland carcinoma among childhood cancer survivors: role of treatment and cigarette smoking. ISS Conference, May 2009.

**A0903** Bornstein MH, Haynes OM, Leisenring W, Hayashi R, Armstrong GT, Robison LL, Zeltzer L. Mental retardation and learning disability in survivors of childhood cancer diagnosed in infancy: a report from the Childhood Cancer Survivor Study. Society for Research in Child Development, 2009.

**A0904** Stuber M, Meeske K, Zebrack B, Krull K, Stratton K, Leisenring W, Robison LL, Zeltzer L. Prevalence and predictors of Posttraumatic Stress Disorder in adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology, 2009, platform presentation.

**A0905** Krull KR, Huang S, Hudson MM, Gurney JG, Srivastava DK, Klosky J, Ness KK, Leisenring W, Termuhlen A, Robison LL. Adolescent psychopathology and adult health behaviors in long-term survivors of childhood cancer: Findings from the Childhood Cancer Survivors Study. American Society of Clinical Oncology, 2009.

**A0906** Kirchhoff AC, Leisenring W, Ness KK, Park ER, Friedman DL, Oeffinger KC, Armstrong GT, Krull KR, Robison LL, Wickizer T. Health-related unemployment among survivors and siblings in the Childhood Cancer Survivor Study (CCSS). National Research Service Award trainees meeting at Academy Health, June 2009, oral presentation.

## 2008

**A0801** Mulrooney DA, Yeazel M, Mitby P, Kawashima T, Leisenring WM, Stovall M, Green DM, Sklar CA, Robison LL, Mertens AC. Cardiovascular disease in adult survivors of childhood and adolescent cancer: a report from the CCSS. International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2008; American Society of Clinical Oncology Annual Meeting, June 2008, oral presentation.

**A0802** Armstrong GT, Ness KK, Whitton J, Leisenring W, Yasui Y, Zeltzer L, Donaldson SS, Hudson M, Robison LL, Packer R. Long-term outcomes among survivors of childhood central nervous system tumors: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology, June 2008, oral presentation; International Symposium on Pediatric Neuro-Oncology, June 2008; Child Neurology Society, 2008.

**A0803** Armstrong GT, Whitton J, Chow E, Leisenring W, Gajjar A, Kun L, Robison LL, Sklar C. Abnormal timing of menarche in survivors of childhood central nervous system tumors. International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2008; ISPNO 13<sup>th</sup> Annual Meeting, June 2008.

**A0804** Ellenberg L, Gioia G, Liu Q, Yasui Y, Packer R, Mertens A, Donaldson S, Kaden-Lottick N, Armstrong GT, Robison LL, Zeltzer LK. Executive functioning in long-term survivors of childhood brain tumors: a report from the Childhood Cancer Survivor Study (CCSS). International Neuropsychosocial Society Annual Meeting, February 2008.

**A0805** Laverdière C, Liu Q, Yasui Y, Nathan P C, Gurney JG, Stovall M, Diller LR, Cheung NK, Wolden S, Robison LL, Sklar CA. Long-term outcomes in survivors of neuroblastoma: a report from the Childhood Cancer Survivor Study. International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2008.

**A0806** Lown EA, Goldsby R, Mertens AC, Greenfield T, Bond J, Whitton J, Korcha R, Robison LL, Zeltzer LK. Alcohol consumption patterns and risk factors among childhood cancer survivors compared to siblings and general population peers. International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2008.

**A0807** Bluhm E, Oeffinger K, Sklar CA, Meadows A, Hayashi R, Mertens AC, Kawashima T, Donaldson S, Meacham L, Stovall M, Robison LL, Inskip P. Risk factors for common health conditions occurring five years after NHL: a report from the Childhood Cancer Survivor Study (CCSS). International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2008.

**A0808** Ginsberg JP, Ness K, Goodman P, Leisenring W, Robison LL, Oeffinger KC. Long-term follow-up among survivors of childhood Ewing's sarcoma: a report of the Childhood Cancer Survivor Study (CCSS). International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2008.



**A0809** Ness KK, Leisenring WM, Huang S, Hudson MM, Gurney JG, Whelan K, Hobbie WL, Lanctot JQ, Armstrong GT, Robison LL, Oeffinger KC. Physical activity – patterns and predictors of sedentary lifestyle among adult survivors of childhood cancer. International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2008.

**A0810** Meacham LR, Chow EJ, Kamdar KY, Ness KK, Chen Y, Yasui Y, Oeffinger KC, Sklar CA, Robison LL, Mertens AC. Cardiovascular risk factor cluster in adult survivors of pediatric cancer: a report of the Childhood Cancer Survivor Study (CCSS). International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2008.

**A0811** Oeffinger KC, Ford JS, Moskowitz CS, Diller L, Hudson MM, Chou JF, Smith S, Mertens AC, Robison LL. Mammogram practices of women at risk for breast cancer following chest radiation for a pediatric cancer: a report from the Childhood Cancer Survivor Study (CCSS). International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2008.

**A0812** Smith S, Ford JS, Rakowski W, Moskowitz CS, Robison LL, Oeffinger KC. Decisional balance, stages of adoption, and screening mammography among women at risk of breast cancer following a pediatric malignancy: a report from the Childhood Cancer Survivor Study (CCSS). International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2008.

**A0813** Mertens A, Leisenring W, Mitby P, Hammond S, Perkins J, Robison LL, Hudson M, Meadows A. Sun sensitivity, sun exposure and risk of skin cancer in a cohort of adult survivors of childhood and adolescent cancer. A report from the Childhood Cancer Survivor Study (CCSS). International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2008; 4<sup>th</sup> Biennial Cancer Survivorship Research Conference, June 2008.

**A0814** Bornstein MC, Haynes M, Hayashi R, Leisenring W, Armstrong GT, Robison LL, Zeltzer L. Mental retardation and learning disability in survivors of childhood cancer diagnosed in infancy: a report from the Childhood Cancer Survivor Study. International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2008.

**A0815** Henderson T, Rajaraman P, Stovall M, Olive A, Smith S, Mertens A, Meadows A, Neglia J, Whitton J, Inskip P, Robison LL, Diller L. New primary sarcomas in survivors of childhood cancer: a detailed analysis of the effects of treatment: a report from the Childhood Cancer Survivor Study. International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2008; American Society of Clinical Oncology, June 2008, oral presentation.

**A0816** Lown EA, Goldsby R, Mertens AC, Korcha R, Greenfield T, Bond J, Whitton J, Robison LL, Zeltzer LK. Adult siblings of childhood cancer survivors are heavy drinkers: which siblings are at risk? A report from the Childhood Cancer Survivor Study. American Public Health Association, October 2008, poster presentation.

**A0817** Lu Q, Tsao JCI, Leisenring W, Armstrong GT, Robison LL, Zeltzer LK. Posttraumatic stress symptoms, pain and related impairment among adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). 4<sup>th</sup> Biennial Cancer Survivorship Research Conference, June 2008.

**A0818** Castellino SM, Tooze J, Geiger A, Leisenring W, Goodman P, Mertens A, Stovall M, Robison LL, Hudson M. Risks of mortality in 5 year survivors of Hodgkin's lymphoma in the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2008, oral presentation.

**A0819** Green DM, Kawashima T, Leisenring W, Stovall M, Donaldson S, Sklar CA, Byrne J, Robison LL. Fertility of females after treatment for childhood cancer: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2008, oral presentation.

**A0820** Cox CL, Montgomery M, Oeffinger K, Leisenring W, Zeltzer L, Whitton J, Mertens A, Hudson MM, Robison LL. Childhood cancer survivors: patient and provider influences on physical activity participation. 4<sup>th</sup> Biannual Cancer Survivorship Research Conference, June 2008.

**A0821** Cox CL, Hudson M, Oeffinger K, Whitton J, Montgomery M, Mertens A, Robison LL. Determinants of participation in recommended medical screening by at-risk adult survivors of childhood cancer. American Public Health Association Meeting & Exposition, October 2008, oral presentation.

**A0822** Mertens AC, Leisenring W, Mitby P, Meadows A, Robison LL, Hudson M. Sun protection behaviour in a cohort of adult survivors of childhood and adolescent cancer. A report from the Childhood Cancer Survivor Study (CCSS). International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2008, platform presentation.

**A0823** Klesges LM, Ness KK, Lanctot JQ, Lown A, Whalen K, Huang S, Leisenring W, Stovall M, Oeffinger K, Robison LL, Hudson M. Prevalence and clustering of multiple behavioural risk factors in adult survivors of childhood cancer. 4<sup>th</sup> Biennial Cancer Survivorship Research Conference: Mapping the New Challenges, June 2008, poster presentation.

**A0824** Goldsby R, Nathan P, Bowers D, Yeaton-Massey A, Raber S, Hill D, Robison LL, Liu Q, Yutaka Y, Zeltzer L, Armstrong GT, Packer R. Long-term neurologic outcomes in adult survivors of childhood acute lymphoblastic leukaemia: results from the Childhood Cancer Survivor Study (CCSS). Child Neurology Society, 2008.

**A0825** Cox CL, Mertens A, Hudson M, Whitton J, Montgomery M, Robison LL. Determinants of mammography screening participation in adult female survivors of childhood cancer. 2008 ASCO Breast Cancer Symposium, September 2008, poster presentation.

## 2007

**A0701** Green DM, Kawashima T, Leisenring W, Stovall M, Donaldson SS, Sklar CA, Byrne J, Robison LL. Fecundity of males after treatment for childhood cancer. A report from the Childhood Cancer Survivor Study (CCSS). ASCO Annual Meeting, 2007.

**A0702** Green DM, Kawashima T, Leisenring W, Stovall M, Donaldson SS, Sklar CA, Byrne J, Robison LL. Fertility of males after treatment for childhood cancer. A report from the Childhood Cancer Survivor Study (CCSS). SIOP 2007.

**A0703** Lown EA, Goldsby R, Mertens AC, Greenfield T, Bond J, Whitton J, Korcha R, Robison LL, Zeltzer LK. Alcohol Consumption patterns and risk factors among childhood cancer survivors compared to siblings and general population peers. American Psychosocial Oncology Society, 2007.

**A0704** Nathan PC, Greenberg ML, Ness KK, Mahoney MC, Gurney JG, Hudson MM, Donaldson SS, Leisenring WM, Robison LL, Oeffinger KC. Risk-based care in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). ASCO Annual Meeting, June 03, 2007.

**A0705** Wasilewski-Masker K, Leisenring W, Meacham LR, Hammond S, Meadows AT, Robison LL, Mertens AC. Late recurrence in survivors of childhood and adolescent cancer: a report from the Childhood Cancer Survivor Study (CCSS). ASCO Annual Meeting, 2007

**A0706** Kaste SC, Baker S, Goodman P, Leisenring W, Stovall M, Hayashi R, Yeazel M, Hudson MM, Sklar C, Robison LL. Dental health of long-term survivors of childhood cancer: the childhood cancer survivor study (CCSS). ASCO Annual Meeting, 2007

**A0707** Garney EG, Liu Q, Sklar CA, Meacham LR, Stovall M, Yasui Y, Robison LL, Oeffinger KC. Obesity in adult survivors of childhood acute lymphoblastic leukemia: a follow-up report from the childhood cancer survivor study. ASCO Annual Meeting, 2007.

**A0708** Laverdiere C, Liu Q, Yasui Y, Nathan PC, Gurney J, Stovall M, Diller L, Cheung NK, Wolden S, Robison LL, Sklar CA. Long-term complications of neuroblastoma: A report from the childhood cancer survivor study. ASCO Annual Meeting, 2007.

**A0709** Bluhm EC, Ronckers C, Hayashi RJ, Neglia JP, Mertens AC, Meadows AT, Mitby PA, Stovall M, Robison LL, Inskip PD. Cause-specific mortality and second cancer incidence after non-Hodgkin lymphoma: a report from the Childhood Cancer Survivor Study. ASH Annual Meeting, 2007.

## 2006

**A0601** Baker SK, Leisenring W, Hayashi R, Mertens A, Stovall M, Donaldson S, Robison LL, Sklar C. Impact of hematopoietic cell transplantation with total body irradiation on the health status of childhood leukemia survivors: a Report for the CCSS. American Society of Hematology, 2006.

**A0602** Casillas J, Brooks S, Mertens A, Hudson M, Robison LL, Oeffinger K. The impact of psychosocial factors on access to care in adult minority survivors: a Childhood Cancer Survivor Study. Western Society for Pediatric Research, 2006, platform presentation.

**A0603** Henderson T, Whitton J, Hammond S, Stovall M, Meadows A, Mertens A, Neglia J, Robison LL, Diller L. Sarcoma as a subsequent malignancy in survivors of childhood malignancy: a report from the CCSS. 9th International Conference on Long Term Complications of Treatment of Children and Adolescent for Cancer, 2006, poster presentation.

**A0604** Lansdale M, Marina N, Castellino S, Goodman P, Hudson MM, Mertens AC, Sklar CA, Leisenring W, Robison LL, Oeffinger KC. Screening for Hepatitis C Virus (HCV) Infection in long-term pediatric cancer survivors: a report from the Childhood Cancer Survivor Study (CCSS). Third biennial NCI Cancer Survivorship Conference, 2006, poster presentation.

**A0605** Laverdiere C, Liu Q, Yasui Y, Nathan PC, Gurney J, Stovall M, Diller L, Cheung N, Wolden S, Robison LL, Sklar CA. Long-term complications in survivors of neuroblastoma: a report from the Childhood Cancer Survivor Study. ASCO, 2006.

**A0606** Lu Q, Tsao JCI, Leisenring W, Robison LL, Zeltzer LK. Pain prevalence among long-term survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). Third biennial NCI Cancer Survivorship Conference, 2006, poster presentation.

**A0607** Mertens AC, Schultz KA, Ness KK, Whitton J, Recklitis C, Zebrack B, Zeltzer L, Robison LL. Social adjustment in survivors of childhood cancer: a report from the CCSS. American Psychosocial Oncology Society, 2006, poster presentation.

**A0608** Mertens AC, Steele JR, Goodman P, Oeffinger KC, Robison LL, Hudson MM. Follow-Up care in cancer survivors: newsletters can't do it alone - a report from the Childhood Cancer Survivor Study. American Psychosocial Oncology Society, 2006, platform presentation.

**A0609** Mitby PA, Mertens AC, Hudson MM, Eshelman DE, Jacox C, Jones JK, Kamani S, Allam RK, Oeffinger KC. Does a cognitive-based intervention increase the likelihood of screening for serious late effects in adult survivors of childhood cancer? Project vision: a report from CCSS. 9th International Conference on Long Term Complications of Treatment of Children and Adolescent for Cancer, 2006, platform presentation.

**A0610** Mulrooney DA, Dover DC, Yasui Y, Ness K, Mertens AC, Neglia JP, Sklar CA, Robison LL, Davies SM. Twenty years of follow-up among survivors of childhood and young adult Acute Myeloid Leukemia (AML): a report from the Childhood Cancer Survivor Study (CCSS). American Society of Hematology, 2006, media platform presentation.

**A0611** Ness K, Mertens AC, Zeltzer L, Gurney J, Leisenring W, Robison LL. Physical performance and health related quality of life in adult survivors of childhood cancer. Psychosocial and Neurocognitive Consequences of Childhood Cancer, 2006, platform presentation.

**A0612** Schultz KAP, Ness KK, Whitton J, Recklitis C, Zebrack B, Robison L, Zeltzer L, Mertens AC. Social adjustment of adolescent survivors in the Childhood Cancer Survivor Study. 9th International Conference on Long Term Complications of Treatment of Children and Adolescent for Cancer, 2006, platform presentation.

**A0613** Whelan KF, Kawashima T, Mitby P, Blatt J, Waterbor J, Castleberry R, Sande J, Packer R, Sklar C, Robison LL, Mertens A. Auditory and speech complications on childhood cancer survivors: a report from CCSS. 9th International Conference on Long Term Complications of Treatment of Children and Adolescent for Cancer, 2006, platform presentation.

**A0614** Whelan K, Mertens A, Castleberry R, Mitby P, Kawashima T, Sklar C, Packer R, Waterbor J, Blatt J, Robison LL. Visual complications in childhood cancer survivors: a Childhood Cancer Survivor Study report. American Society of Clinical Oncology, 2006, platform presentation.

## 2005

**A0501** Owen JE, Kawashima T, Myers CD, Lu Q, Zebrack B, Mertens A, Robison LL, Zeltzer LK. Pain prevalence and retrospective incidence in childhood cancer survivors: a report from the Childhood Cancer Survivor Study. American Society of Psychosocial Oncology, January 2005, platform presentation.

**A0502** Nagarajan R, Clohisy DR, Neglia JP, Sklar C, Robison, LL. Amputation in pediatric lower extremity bone sarcoma survivors: predictors of function and quality of life. American Society of Pediatric Hematology-Oncology meeting May 2005, poster presentation.

**A0503** Ness KK, Mertens AC, Hudson MM, Wall MM, Leisenring WM, Oeffinger KC, Sklar CA, Robison LL, Gurney JG. Physical performance limitations and participation restrictions among long-term childhood cancer survivors: the Childhood Cancer Survivor Study. American Society of Pediatric Hematology-Oncology, May 2005, poster presentation.

**A0504** Gurney JG, O'Leary M, Ness KK, Shalamar SD, Baker KS. Metabolic syndrome and growth hormone deficiency in adult survivors of childhood leukemia. American Society of Pediatric Hematology-Oncology, May 2005, submitted.

**A0505** Oeffinger K, Mertens A, Sklar C, Kawashima T, Hudson M, Meadows A, Marina N, Kadan-Lottick N, Leisenring L, Robison LL. Prevalence and severity of chronic diseases in adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology, May 2005, platform presentation, plenary session.

**A0506** Mertens A, Yasui Y, Liu Y, Neglia J, Robison LL. Late cause-specific mortality in long-term survivors of childhood and adolescent cancer: an update from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology, May 2005, poster presentation.

**A0507** Henderson T, Whitton J, Hammond S, Stovall M, Meadows A, Mertens A, Neglia J, Robison LL, Cook F, Diller L. Sarcomas as a subsequent malignancy in survivors of pediatric malignancy: the Childhood Cancer Survivor Study. American Society of Clinical Oncology, May 2005, platform presentation.

**A0508** Bowers DC, McNeil DE, Liu Y, Leisenring W, Gurney J, Stovall M, Donaldson SS, Packer RJ, Robison LL, Oeffinger KC. Risk of stroke among >5-year survivors of childhood leukemia and brain tumors: A report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology, May 2005, platform presentation.



**A0509** Casillas J, Castellino DM, Hudson MM, Mertens AC, Whitton J, Brooks SL, Zeltzer LK, Ablin A, Robison LL, Oeffinger KC. The effect of insurance and ethnicity on healthcare access and health behaviors: the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology, May 2005, poster presentation.

**A0510** Mertens AC, Neglia JP, Hammond S, Perkins JL, Liu Y, Robison LL. Incidence rates of keratinocyte carcinoma (KC) in survivors of childhood and adolescent cancer: a report from the Childhood Cancer Survivor Study (CCSS). Society of Investigative Dermatology, May 2005, platform presentation, plenary session.

**A0511** Ergun-Longmire B, Mertens AC, Mitby P, Quin J, Heller G, Yasui Y, Robison LL, Sklar CA. Risk of second neoplasms in survivors of childhood cancer treated with growth hormone: an updated report from the Childhood Cancer Survivor Study. Endocrine Society, 2005, platform presentation.

**A0512** Chemaitilly W, Mertens AC, Mitby P, Whitton J, Stovall M, Yasui Y, Robison LL, Sklar CA. Acute ovarian failure in survivors of childhood and adolescent cancer: data from the Childhood Cancer Survivor Study. Endocrine Society, 2005, poster presentation.

## 2004

**A0401** Sigurdson A, Ronckers C., Mertens A, Sklar C, Stovall M, Smith S, Liu Y, Hammond S, Berkow R, Neglia J, Meadows A, Robison LL, Inskip P. Second primary thyroid cancer after a first childhood malignancy: a report from the Childhood Cancer Survivor Study. American Association for Cancer Research, 2004, oral presentation.

**A0402** Lu Q, Myers CD, Owen J, Zebrack BJ, Zevon MA, Mertens A, Robison LL, and Zeltzer LK. Pain prevalence among long-term survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Pain Society, 2004, poster presentation.

**A0403** Recklitis CJ, Hudson MM, Zebrack BJ, Mertens AC, Mitby PA, Nagarajan R, Robison LL, Zeltzer L. Psychosocial functioning in a large-scale cohort of childhood cancer survivors: a report from the Childhood Cancer Survivor Study. American Psychosocial Oncology Society, 1st annual conference, 2004, oral presentation.

**A0404** Bassal M, Kadan-Lottick NS, Neglia J, Taylor L, Yasui Y, Friedman DL, Mertens AC, Robison LL, Meadows AT. Risk of rare adult-type carcinomas as a subsequent neoplasm in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology, 2004, poster presentation; 8th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2004, poster presentation.

**A0405** Bowers DC, McNeil DE, Liu Y, Yasui Y, Stovall M, Gurney JG, Hudson MM, Robison LL, Oeffinger KC. Stroke following therapy for Hodgkin Disease (HD): a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology, 2004, poster presentation; 8th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2004, oral presentation.

**A0406** Friedman DL, Whitton J, Yasui Y, Mertens AC, Hammond S, Stovall M, Donaldson SS, Meadows AT, Robison LL, Neglia JP. Risk of second malignant neoplasms (SMN) 20 years after childhood cancer: the updated experience of the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology, 2004, oral presentation.

**A0407** Friedman DL, Whitton J, Yasui Y, Mertens AC, Hammond S, Stovall M, Donaldson SS, Meadows AT, Robison LL, Neglia JP. Second malignant neoplasms in five-year survivors of childhood cancer: an update from the Childhood Cancer Survivor Study (CCSS). 8th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2004, oral presentation.

**A0408** Termuhlen A, Tersak J, Hudson M, Mertens A, Gimpel N, Bleyer W, Yasui Y, Robison LL, Oeffinger K. Health status, medical care, preventive screening, and risk behaviors in adult survivors of cancer diagnosed during adolescence: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology, 2004, poster presentation; 8th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2004, poster presentation.

**A0409** Meacham LR, Gurney JG, Mertens AC, Ness KK, Sklar CA, Robison LL, Oeffinger KC. Body mass index (BMI) and final height in adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). Society for Pediatric Research, 2004, poster presentation; 8th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2004, oral presentation.

**A0410** Meacham LR, Gimpel N, Overa R, Whitton JA, Sklar CA, Robison LL, Oeffinger KC. Diabetes mellitus in long-term survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). Society for Pediatric Research, 2004, poster presentation; 8th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2004, poster presentation.

**A0411** Sklar C, Mertens A, Mitby P, Whitton J, Stovall M, Mulder J, Green D, Nicholson S, Yasui Y, Robison LL. Premature menopause in survivors of childhood and adolescent cancer: data from the Childhood Cancer Survivor Study (CCSS). Society for Pediatric Research, 2004, oral presentation; 8th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2004, oral presentation.

**A0412** Castellino SM, Hudson MM, Mertens AC, Yeazel M, Whitton J, Brooks S, Ablin A, Castleberry RP, Hobbie WL, Kaste S, Robison LL, Oeffinger KC. Comparison of long-term outcomes, health care utilization, and health behaviors in young adult African-American (AA) survivors of childhood cancer with white, non-Hispanic (WNH) survivors: a Childhood Cancer Survivor Study (CCSS). Pediatric Academic Societies, 2004, poster presentation; 8th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2004, poster presentation.

**A0413** Perkins JL, Liu Y, Mitby PA, Neglia JP, Hammond S, Stovall M, Meadows AT, Hutchinson R, Dreyer Z, Robison LL, Mertens AC. Nonmelanoma skin cancer (NMSC) in survivors of childhood and adolescent cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology, 2004, oral presentation; 8th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2004, oral presentation.

**A0414** Mulrooney DA, Mertens AC, Neglia JP, Green DM, Zeltzer L, Robison LL. Fatigue and sleep in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology, 2004, poster presentation; 8th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2004, poster presentation.

**A0415** Owen JE, Myers CD, Lu Q, Zebrack B, Zevon M, Mertens AC, Robison LL, Zeltzer LK. Pain prevalence in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). 8th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2004, poster presentation.

**A0416** Mertens A, Riley A, Patenaude A, Bursch B, Robison LL, Zeltzer L. Health and well-being in adolescent survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. Cancer Survivorship: Pathways to Health after Treatment Symposium, 2004, poster presentation.

## 2003

**A0301** Neglia J, Inskip P, Liu Y, Yasui Y, Hammond S, Stovall M, Packer R, Meadows A, Mertens A, Robison LL. Subsequent neoplasms (SNS) of the central nervous system (CNS) in survivors of childhood cancer: a case/control study from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology, 2003, oral presentation.

**A0302** Brownstein C, Mertens A, Mitby P, Stovall M, Qin J, Heller G, Robison LL, Sklar C. Factors that affect final height and change in height SDS in survivors of childhood cancer treated with growth hormone (GH): a report from the Childhood Cancer Survivor Study (CCSS). Pediatric Academic Societies' Annual Meeting, 2003, poster presentation.

**A0303** Yeazel M, Oeffinger K, Gurney J, Mertens A, Hudson M, Emmons K, Chen H, Robison LL. The cancer screening practices of long-term childhood cancer survivors. American Association for Cancer Research, 2003, poster presentation.

**A0304** Perkins J, Yasui Y, Liu Y, Hammond S, Stovall M, Neglia J, Meadows A, Robison LL, Mertens A. Nonmelanoma skin cancer (NMSC) in survivors of childhood cancer: A report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology, 2003, oral presentation.

**A0305** Mertens A, Mitby P, Radloss G, Perentesis J, Kiffmeyer W, Neglia J, Meadows A, Jones I, Potter J, Friedman D, Yasui Y, Robison L, Davies S. XRCC1 and glutathione s-transferase polymorphism and susceptibility to therapy-related cancer in Hodgkin's disease survivors: a report from the Childhood Cancer Survivor Study. American Association for Cancer Research, 2003, oral presentation.

**A0306** Mulrooney D, Mertens A, Neglia J, Green D, Zeltzer L, Robison L. Fatigue and sleep disturbance in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology, 2003, poster presentation.

## 2002

**A0201** The Investigators of the Childhood Cancer Survivor Study (CCSS). Long-Term outcomes among 5-year survivors of childhood and adolescent cancers. American Society of Pediatric Hematology/Oncology, 2002, oral presentation.

**A0202** Nagarajan R, Clohisy D, Greenberg M, Neglia JP, Sklar C, Yasui Y, Zeltzer L, Robison LL. Limb function and quality of life (QOL) of survivors of pediatric lower limb bone tumors: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology, 2002, poster presentation.

- A0203** Mitby PA, Robison LL, Whitton JA, Zevon MA, Gibbs IC, Tersak JM, Meadows AT, Stovall M, Zeltzer LK, Mertens AC. Utilization of special education (SE) services and educational attainment (EA) among long-term survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology, 2002, poster presentation.
- A0204** Hudson MM, Oeffinger K, Mertens A, Hobbie W, Chen H, Gurney J, Yeazel M, Robison LL. General health status of long-term childhood cancer survivors: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology, 2002, oral presentation.
- A0205** Kadan-Lottick N, Robison LL, Gurney J, Neglia J, Yasui Y, Hayashi R, Hudson M, Greenberg M, Mertens A. What do childhood cancer survivors know about their past diagnosis and treatment? A report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology, 2002, poster presentation.
- A0206** Oeffinger KC, Mertens A, Sklar C, Yasui Y, Fears T, Stovall M, Robison LL. Obesity in Adult survivors of childhood acute leukemia: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology, 2002, poster presentation.
- A0207** Mertens A, Yasui Y, Liu Y, Stovall M, Hutchinson R, Sklar C, Robison LL. Pulmonary complications in survivors of childhood and adolescent cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology, 2002, poster presentation.
- A0208** Nagarajan R, Clohisey DR, Greenberg M, Neglia JP, Sklar C, Zeltzer L, Yasui Y, Robison LL. Limb Function and quality of life (QOL) of survivors of pediatric lower extremity bone tumors: a report from the Childhood Cancer Survivor Study. 7th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2002, oral presentation.
- A0209** Kenney LB, Diller L, Friedman D, Neglia J, Yasui Y, Mertens A, Inskip P, Meadows A, Robison LL. Risk factors for breast cancer (BC) in women from the Childhood Cancer Survivor Study (CCSS). 7th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2002, oral presentation.
- A0210** Oeffinger K, Mertens A, Hudson M, Castillo J, Gurney J, Yeazel M, Chen H, Robison LL. Health care utilization of adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. 7th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2002, oral presentation.
- A0211** Oeffinger K, Mertens A, Sklar C, Yasui Y, Fears T, Stovall M, Vik T, Robison LL. Acute lymphoblastic leukemia and obesity: a report from the Childhood Cancer Survivor Study. 7th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2002, oral presentation.
- A0212** Pang JWY, Friedman DL, Whitton J, Weiss NS, Mertens A, Robison LL. Employment status of adult survivors of pediatric cancers: a report from the Childhood Cancer Survivor Study (CCSS). 7th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2002, oral presentation.
- A0213** Mertens A, Yasui Y, Liu Y, Stovall M, Hutchinson R, Sklar C, Robison LL. Pulmonary complications in survivors of childhood and adolescent cancer: a report from the Childhood Cancer Survivor Study (CCSS). 7th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2002, oral presentation.
- A0214** Yasui Y, Liu Y, Neglia J, Friedman D, Bhatia S, Meadows A, Mertens A, Whitton J, Robison LL. A cautionary note on the methodology for the analysis of second malignant neoplasm (SMN) risk in childhood cancer survivors: breast SMN after Hodgkin disease as an example. 7th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2002, oral presentation.
- A0215** Mitby P, Robison LL, Whitton J, Zevon M, Gibbs I, Tersak J, Meadows A, Stovall M, Zeltzer L, Mertens A. Utilization of special education services and educational attainment among long-term survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). 7th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2002, oral presentation.
- A0216** Gurney JG, Punyko J, Neglia J, Packer R, Sklar C, Kadan-Lottick N, Nicholson HS, Wolden S, McNeil DE, Mertens A, Robison LL. Non-neurological late effects among childhood brain tumor survivors: an analysis from the childhood cancer survivors study. 7th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2002, oral presentation.
- A0217** Kadan-Lottick N, Robison LL, Gurney J, Neglia J, Yasui Y, Hayashi R, Hudson M, Greenberg M, Mertens A. What do childhood cancer survivors know about their past diagnosis and treatment? A report from the Childhood Cancer Survivor Study. 7th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2002, oral presentation.

## 2001

**A0101** Sklar C, Mertens A, Mitby P, Qin J, Heller G, Yasui Y, Robison L. Risk of Disease recurrence and second neoplasms (SN) in survivors of childhood cancer treated with growth hormone (GH): data from the Childhood Cancer Survivor Study (CCSS). Pediatric Endocrine Society, 2001, oral presentation.

**A0102** Green D, Whitton J, Stovall M, Mertens A, Donaldson S, Ruymann F, Pendergrass T, Robison LL. Pregnancy outcome of partners of male survivors of childhood cancer. A report from the Childhood Cancer Survivor Study (CCSS). American Association of Cancer Research, 2001, poster presentation.

**A0103** Kadan N, Friedman D, Mertens A, Yasui Y, Whitton J, Robison LL, Strong L. Clarification of Self-Reported Family history data by telephone interview: a report from the Childhood Cancer Survivor Study (CCSS). American Association of Cancer Research, 2001, poster presentation.

**A0104** Friedman D, Kadan-Lottick N, Liu Y, Mertens A, Robison LL, Strong L. History of Cancer among First-Degree relatives of childhood cancer survivors: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology, 2001, poster presentation.

**A0105** Neglia J, Yasui Y, Mertens A, Friedman D, Hammond S, Donaldson S, Stovall M, Meadows A, Robison LL. Second primary neoplasms (SPNs) of the central nervous system (CNS) in five-year survivors of childhood cancer — a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology, 2001, oral presentation.

**A0106** Gurney JG, Packer R, Punyko J, Sklar C, Kadan-Lottick N, Neglia J, Nicholson S, Wolden S, McNeil E, Mertens A, Robison LL. Non-neurological late effects among childhood brain tumor survivors: a preliminary analysis from the Childhood Cancer Survivor Study. Society for Neuro-Oncology, 2001, oral presentation.

**A0107** The Investigators of the Childhood Cancer Survivor Study (CCSS). Long-term outcomes among survivors of cancer during childhood and adolescence. Society for Epidemiologic Research, 2001, poster presentation.

**A0108** Mulvihill JJ, Strong LC, Robison LL. Genetic disease in offspring of survivors of childhood and adolescent cancer. American Society of Human Genetics, 2001, poster presentation.

**A0109** Hammond S, Neglia J, Qualman S, Mertens A, Yasui Y, Meadows A, Robison LL. Tissue archive of second malignant neoplasms (SMN) in the Childhood Cancer Survivor Study (CCSS). Pediatric Academic Societies, 2001, poster presentation.

## 2000

**A0001** Packer RJ, Gurney J, Zeltzer L, Mertens A, Robison LL. Long-Term Neurologic and Neurocognitive status of childhood brain tumors: a Childhood Cancer Survivor Study (CCSS) Report. Society for Neuro-Oncology, 2000, oral presentation.

**A0002** Neglia J, Yasui Y, Mertens A, Friedman D, Hammond S, Donaldson S, Stovall M, Meadows A, Robison LL. Second primary neoplasms (SPNs) of the central nervous system (CNS) in five year survivors of childhood cancer--a report from the Childhood Cancer Survivor Study (CCSS). International Pediatric Neuro-Oncology Symposium, 2000, oral presentation.

## 1999

**A9901** Sklar C, Whitton J, Mertens A, Stovall M, Green D, Marina N, Greffe B, Wolden S, Robison LL. Thyroid dysfunction in survivors of Hodgkin's disease (HD): data from the Childhood Cancer Survivor Study (CCSS). American Pediatric Society and Society for Pediatric Research, 1999, oral presentation.

**A9902** Mertens A, Neglia J, Yasui Y, Potter J, Nesbit M, Ruccione K, Smithson A, Robison LL. Mortality rates and causes of death in 5-year survivors of childhood and adolescent cancer. American Society of Clinical Oncology, 1999, oral presentation.

**A9903** Neglia J, Mertens A, Yasui Y, Hammond S, Friedman D, Donaldson S, Meadows A, Robison LL. Risk of second primary neoplasms (SPNs) in survivors of childhood cancer--initial analysis of the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology, 1999, oral presentation.

**A9904** Neglia J, Mertens A, Yasui Y, Hammond S, Friedman D, Donaldson S, Meadows A, Robison LL. Risk factors for second primary neoplasms (SPNs) in long-term survivors of childhood cancer--initial analysis of the Childhood Cancer Survivor Study (CCSS). International Society of Paediatric Oncology-American Society of Pediatric Hematology-Oncology meeting, 1999, oral presentation.

**A9905** Mertens A, Neglia J, Yasui Y, Potter J, Nesbit M, Ruccione K, Smithson A, Robison LL. Mortality in five-year survivors of childhood and adolescent cancer — preliminary analysis of the Childhood Cancer Survivor Study (CCSS). International Society of Paediatric Oncology-American Society of Pediatric Hematology-Oncology meeting, 1999, poster presentation.

**A9906** Green DM, Whitton J, Stovall M, Mertens A, Ruymann F, Pendergrass T, Robison LL. Pregnancy outcome after treatment for cancer during childhood or adolescence: a report from the Childhood Cancer Survivor Study (CCSS). International Society of Paediatric Oncology-American Society of Pediatric Hematology-Oncology meeting, 1999, oral presentation.

## 1998

**A9801** Hammond S, Qualman S, Neglia J, Meadows A, Robison LL. Mucoepidermoid carcinoma (MEC) of the salivary gland occurring as a second malignant neoplasm (SMN) in the Childhood Cancer Survivor Study (CCSS). Society for Pediatric Pathology, 1998, oral presentation.

## 1997

**A9701** Hammond S, Qualman S, Neglia J, Meadows A, Robison LL. Assessment and validation of second neoplasms in the Childhood Cancer Survivor Study (CCSS). Society for Pediatric Pathology, 1997, oral presentation.

## Investigator-Initiated, Ancillary Studies for External-Funding that Utilize the CCSS Resource

### Ancillary Studies: Completed

**Principal Investigator:** Charles Sklar (Memorial Sloan Kettering Cancer Center)

**Title:** Safety/Efficacy of Growth Hormone Therapy in Survivors of Childhood Cancer

**Dates of Funding:** 9/96 - 8/00

**Funding Source:** Genentech Foundation

**Award:** \$222,150

**Study Aims:** Evaluate the use of growth hormone therapy in survivors of childhood cancer to determine potential impact on final height, risk of cancer-recurrence, and risk of second neoplasm.

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**Principal Investigator:** Karen Emmons (Harvard University)

**Title:** Smoking Cessation among Childhood Cancer Survivors

**Dates of Funding:** 9/98 - 7/03

**Funding Source:** National Institutes of Health (R01 CA77780-04S1)

**Award:** \$2,174,161

**Study Aims:** Conduct a randomized intervention trial to test a peer-based smoking cessation program for long-term survivors of childhood cancer.

---

**Principal Investigator:** H. Stacy Nicholson (Oregon Health Sciences Center)

**Title:** Quality of Life after Successful Treatment for Acute Myelogenous Leukemia

**Dates of Funding:** 7/98 – 6/04

**Funding Source:** National Institutes of Health (R01 CA78960-01)

**Award:** \$732,679

**Study Aims:** Evaluate the occurrence of late effects among five-year survivors of childhood acute myeloid leukemia to compare the risks associated with intensive therapy, including bone marrow transplantation.

---

**Principal Investigator:** Charles Sklar (Memorial Sloan Kettering Cancer Center)

**Title:** Premature Menopause in Survivors of Childhood Cancer

**Dates of Funding:** 9/98 – 8/01

**Funding Source:** National Institutes of Health (R01 CA79024)

**Award:** \$482,000

**Study Aims:** Examine the prevalence and risk factors for premature menopause and associated psychosexual functioning in a cohort of 5500 young adult female survivors of cancer diagnosed during childhood and adolescence.

---

**Principal Investigator:** Kevin Oeffinger (Memorial Sloan Kettering Cancer Center)

**Title:** Patient Perceived Barriers to Long-Term Follow-up for Adult Survivors of Childhood Cancer

**Dates of Funding:** 7/99 – 6/04

**Funding Source:** Robert Wood Johnson Foundation

**Award:** \$232,010

**Study Aims:** Determine the spectrum of, and characteristics predictive for barriers to cancer-related health care of adult survivors of childhood cancer.

---

**Principal Investigator:** John Boice (International Epidemiology Institute)

**Title:** Preconception Radiation and Reproductive Outcomes among Survivors of Childhood Cancer

**Dates of Funding:** 2000 - 2005

**Funding Source:** Westlakes Research Institute

**Award:** \$450,000

**Study Aims:** Investigate the potential risk of transgenerational effects among the offspring of survivors of childhood cancer in the USA and Denmark who were treated with radiation.

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## Ancillary Studies: Completed (continued)

**Principal Investigator:** Ann Mertens (University of Minnesota)

**Title:** Health Profiles in Adolescent Survivors of Childhood Cancer

**Dates of Funding:** 1/01 – 12/03

**Funding Source:** American Cancer Society

**Award:** \$565,000

**Study Aims:** Investigate the physical, cognitive and emotional development of adolescent survivors of childhood cancer to aid in development interventions to improve quality of life.

---

**Principal Investigator:** Rajaram Nagarajan (University of Minnesota)

**Title:** Function and Quality of Life of Survivors of Pediatric Lower Limb Tumors

**Dates of Funding:** 7/01 – 6/02

**Funding Source:** ASCO (Young Investigator Award)

**Study Aims:** Investigate the function, quality of life, and psychosocial outcomes of adult survivors of pediatric lower extremity bone tumors to compare amputation and limb-sparing surgeries within age-specific groups.

---

**Principal Investigator:** Ann Mertens (University of Minnesota)

**Title:** Radiation Dosimetry for Childhood Cancer Survivors

**Dates of Funding:** 1/03 – 12/05

**Funding Source:** Lance Armstrong Foundation

**Award:** \$148,984

**Study Aims:** Estimate tissue-specific dose of radiation received by survivors of childhood cancer who experience selected adverse outcomes within the context of a nested case-control study.

---

**Principal Investigator:** Kevin Oeffinger (Memorial Sloan Kettering Cancer Center)

**Title:** Feasibility Study for Project VISION: A Virtual Information Center for Survivors

**Dates of Funding:** 1/03 – 12/05

**Funding Source:** Lance Armstrong Foundation

**Award:** \$90,190

**Study Aims:** Assess the feasibility of a randomized clinical trial using a virtual information center as a cognitive-based intervention with survivors and health care providers.

---

**Principal Investigator:** James Gurney (University of Minnesota)

**Title:** Metabolic Syndrome in Adult Survivors of Childhood Acute Lymphoblastic Leukemia

**Dates of Funding:** 7/04 – 6/06

**Funding Source:** National Institutes of Health (R21 CA1068778)

**Award:** \$225,000

**Study Aims:** Evaluate clinically the metabolic syndrome and associations with growth hormone deficiency and endothelial impairment as late effects of treatment for childhood acute lymphoblastic leukemia.

---

**Principal Investigator:** Kevin Oeffinger (Memorial Sloan Kettering Cancer Center)

**Title:** Mammography and High-Risk Survivors of Pediatric Cancer

**Dates of Funding:** 9/04 – 7/07

**Funding Source:** National Institute of Health (R21 CA106972)

**Award:** \$225,000

**Study Aims:** Evaluate the prevalence of and factors predictive for mammography among long-term survivors of childhood cancer who are at high-risk for radiation-induced breast cancer.

---

**Principal Investigator:** Lonnie Zeltzer (UCLA)

**Title:** Psychosocial, Behavioral and Pain Outcomes in Survivors of Childhood Cancer

**Dates of Funding:** 1/05 – 12/07

**Funding Source:** Lance Armstrong Foundation

**Award:** \$150,000

**Study Aims:** Determine, within the CCSS cohort, the prevalence and risk factors for psychosocial outcomes in long-term survivors of childhood and adolescent cancer.

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## Ancillary Studies: Completed (continued)

**Principal Investigator:** Ann Mertens (University of Minnesota)  
**Title:** Radiation Dose and Risk of Non-Melanoma Skin Cancer in Cancer Survivors  
**Dates of Funding:** 1/06 – 12/08  
**Funding Source:** Lance Armstrong Foundation  
**Award:** \$247,500  
**Study Aims:** Investigate radiation doses and the subsequent risk of non-melanoma skin cancer in cancer survivors.

---

**Principal Investigator:** Kenan Onel (University of Chicago)  
**Title:** Prognostic Genetic Biomarkers for Cancer  
**Dates of Funding:** 7/07 – 6/10  
**Funding Source:** National Cancer Institute (R21 CA129045-02)  
**Award:** \$220,000  
**Study Aims:** Detailed genomic and functional analysis of inborn susceptibilities in another SMN, IR-induced SMN in Hodgkin disease survivors.

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## Ancillary Studies: Active

**Principal Investigator:** Debra Friedman (Vanderbilt University)  
**Title:** Health Outcomes for Hodgkin Disease Survivors  
**Dates of Funding:** 9/04 – 6/10  
**Funding Source:** National Institutes of Health (R01 CA106750-05)  
**Award:** \$2,279,993  
**Study Aims:** Examine the cumulative incidence and characterize the spectrum of selected adverse physiologic and psychosocial outcomes in contemporarily treated Hodgkin disease survivors.

---

**Principal Investigator:** Yuri Nikiforov (University of Pittsburgh)  
**Title:** Mechanisms of RET/PTC Rearrangements in Thyroid Cancer  
**Dates of Funding:** 4/07 – 3/12  
**Funding Source:** National Institutes of Health  
**Award:** \$1,706,391  
**Study Aims:** To test whether alterations in one or more DNA repair genes lead to an increased rate of RET/PTC rearrangement in vitro and to thyroid cancer in patients exposed to radiation.

---

**Principal Investigator:** Lillian Meacham (Emory University)  
**Title:** Testicular and sexual dysfunction in adult survivors of childhood cancer  
**Dates of Funding:** 1/07 – 12/09  
**Funding Source:** Lance Armstrong Foundation  
**Award:** \$199,715  
**Study Aims:** Investigate the psychosexual function of male long-term survivors of childhood cancer to determine the prevalence of and risk factors for physiological and psychological adverse outcomes.

---

**Principal Investigator:** Robert Klesges (St. Jude Children's Research Hospital)  
**Title:** Efficacy of a Tobacco Quit Line for Childhood Cancer Survivors  
**Dates of Funding:** 1/08 – 11/12  
**Funding Source:** National Institutes of Health (R01 CA127964-04)  
**Award:** \$3,087,994  
**Study Aims:** To conduct a randomized intervention trial designed to test the efficacy of Pro-active versus Reactive approach for smoking cessation.

---

**Principal Investigator:** Tara Henderson (University of Chicago)  
**Title:** Health Beliefs and Behavior: Cohort Studies in Pediatric Cancer Survivorship  
**Dates of Funding:** 9/08 – 8/12  
**Funding Source:** National Institutes of Health (K07 CA134935-02)  
**Award:** \$480,000  
**Study Aims:** Characterize barriers and facilitators of breast cancer surveillance, diagnosis and therapy in women with secondary breast cancer, and explore associations between breast cancer surveillance practices, initial method of detection, health beliefs and breast cancer outcomes.

---



## Ancillary Studies: Active (continued)

**Principal Investigator:** Peter Stambrook (University of Cincinnati)

**Title:** Environmental Exposure: Susceptibility alleles in a DNA damage response pathway

**Dates of Funding:** 12/08 – 11/13

**Funding Source:** National Institutes of Health (1R01 ES016625-01A1)

**Award:** \$2,537,000

**Study Aims:** Define genetic changes a signaling pathway that contribute to susceptibility to breast cancer after environmental exposure.

---

**Principal Investigator:** Elyse Park (Massachusetts General Hospital)

**Title:** Are Adult Survivors of Childhood Cancer Underinsured?

**Dates of Funding:** 1/09 – 12/11

**Funding Source:** Lance Armstrong Foundation

**Award:** \$240,367

**Study Aims:** To compare survivor's and sibling's quality of coverage, perceptions of coverage, consequences of inadequate coverage and coverage-related concerns. To examine survivors' and siblings' knowledge regarding relevant legislations.

---

**Principal Investigator:** Douglas Ris (Baylor College of Medicine)

**Title:** Adult Neurobehavioral Late Effects of Pediatric Low Grade Brain Tumors

**Dates of Funding:** 6/09 – 4/14

**Funding Source:** National Institutes of Health (R01 CA132899-01A1)

**Award:** \$1,827,576

**Study Aims:** Ascertain the presence, degree and nature of neuropsychological dysfunction in adults treated as children for low grade brain tumors and to investigate accelerated cognitive aging.

---

**Principal Investigator:** Stella Davies (Cincinnati Children's Hospital Medical Center)

**Title:** Prediction Model for Radiation Sensitivity in Children with Cancer

**Dates of Funding:** 7/09 – 6/11

**Funding Source:** National Cancer Institute (U01 CA139275-01)

**Award:** \$410,944

**Study Aims:** To identify genetic polymorphisms related to BCC following radiation.

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**Principal Investigator:** Lorna Finnegan (University of Illinois at Chicago)

**Title:** Symptom Cluster Subgroups in Adult Survivors of Childhood Cancer

**Dates of Funding:** 7/09 – 6/11

**Funding Source:** National Institutes of Health (R01 CA136912-02)

**Award:** \$487,066

**Study Aims:** Identify subgroups using a five-symptom cluster including pain, fatigue, sleep disturbance, psychological stress, difficulty concentrating to determine relations with influencing factors (e.g., cancer type, treatment modality, etc.).

---

**Principal Investigator:** Melissa Hudson, Cheryl Cox (St. Jude Children's Research Hospital)

**Title:** Evaluation of Cardiovascular Outcomes Among Childhood Cancer Survivors (ECHOS)

**Dates of Funding:** 9/09 – 7/13

**Funding Source:** National Institutes of Health (R01 NR011322-02)

**Award:** \$2,177,710

**Study Aims:** Assess the efficacy of the intervention in increasing the rate of CV screening and to identify changes in survivor behavioral characteristics in response to the intervention, their mediating effects on the primary outcome, and the cost-effectiveness of the intervention.

---

**Principal Investigator:** Kevin Oeffinger (Memorial Sloan Kettering Cancer Center)

**Title:** EMPOWER Study: Encourage Mammography and Prevention Opportunities for Women Exposed to Radiation

**Dates of Funding:** 9/09 – 7/14

**Funding Source:** National Institutes of Health (R01 CA134722)

**Award:** \$2,392,669

**Study Aims:** Determine efficacy of stepwise two-component intervention on mammography rates and explore moderating and mediating factors.

---

## Ancillary Studies: Active (continued)

**Principal Investigator:** Cheryl Cox (St. Jude Children's Research Hospital)

**Title:** Investigating the needs of childhood cancer survivors: The unreported experience (INSURE)

**Dates of Funding:** 1/10 – 12/11

**Funding Source:** National Cancer Institute (R21 CA14292-01)

**Award:** \$401,603

**Study Aims:** Evaluate the psychometric and item-response performance of a needs assessment survey; evaluate sample selection participants and response rates to inform future longitudinal needs assessment surveys.

---

**Principal Investigator:** Chaya Moskowitz (Memorial Sloan Kettering Cancer Center)

**Title:** Prediction model: Breast Cancer in Women Irradiated for Pediatric Malignancy

**Dates of Funding:** 4/10 – 1/14

**Funding Source:** National Institutes of Health (R01 CA136783)

**Award:** \$1,630,970

**Study Aims:** Determine association of dose of chest radiation, additional treatment factors, and traditional breast cancer risk factors associated with risk of breast cancer among childhood cancer survivors, then develop a breast cancer risk prediction tool.

---

**Principal Investigator:** Kayla Kamdar (Baylor)

**Title:** Genetic Susceptibility to Obesity after Treatment for Childhood Leukemia

**Dates of Funding:** 10/10 – 9/13

**Funding Source:** Leukemia & Lymphoma Society Translational Research Award

**Award:** \$600,000

**Study Aims:** Using genome-wide and candidate pathway analyses, this study aims to identify genetic variants and ultimately key biological pathways that are involved in the development of obesity.

---

**Principal Investigator:** Thomas Hardee (Drexel University)

**Title:** Latent Trajectories of Late Treatment Effects in Pediatric Brain Tumor Survivors

**Dates of Funding:** 1/11 - 1/13

**Funding Source:** Oncology Nurse Society Foundation

**Award:** \$10,000

**Study Aims:** Identify longitudinal patterns of psychosocial outcomes in adult survivors of childhood brain tumors

---

**Principal Investigator:** David Hodgson (University of Toronto)

**Title:** Secondary prevention among childhood cancer survivors: a quantitative approach to facilitate the effective use of screening

**Dates of Funding:** 4/11 – 3/13

**Funding Source:** POGO: Pediatric Cancer Outcomes Initiative (PCOI)

**Award:** \$115,140

**Study Aims:** To quantify the benefit of selected health maneuvers among childhood cancer survivors (early onset breast and colorectal cancer screening, echocardiography) using Markov transition-state models.

---

**Principal Investigator:** Siv Sivaloganathan (University of Waterloo)

**Title:** Effective estimation of second cancer risks and resultant possible improvements in treatment protocols

**Dates of Funding:** 4/11 – 3/14

**Funding Source:** Canadian Institutes of Health Research – NSERC CHRP

**Award:** \$468,819

**Study Aims:** To develop predictive models of second cancer risk among adolescent Hodgkin lymphoma patients based on 3-dimensional normal tissue radiation dosimetry.

---

**Principal Investigator:** Jean Nakamura (University of California, San Francisco)

**Title:** Neurofibromin and response to genotoxins

**Dates of Funding:** 7/12 - 6/15

**Funding Source:** St. Baldrick's Foundation

**Award:**

**Study Aims:** (1) Determine whether loss of heterozygosity in tumor suppressor genes identified in the *Nf1* mutant mouse model occurs in second malignant neoplasms of childhood cancer survivors, and (2) determine whether transcript levels of candidate tumor suppressor genes are reduced in second malignant neoplasms.

---

## Ancillary Studies: Active (continued)

**Principal Investigator:** Emily Tonorezos (Memorial Sloan Kettering Cancer Center)

**Title:** Diet and insulin resistance in survivors of childhood leukemia

**Dates of Funding:** 6/11 – 6/14

**Funding Source:** American Cancer Society (Career Development Award)

**Award:** \$300,000

**Study Aims:** 1) Determine the effectiveness of a remotely delivered diet and physical activity intervention among obese ALL survivors, 2) Calculate the effect of the diet and physical activity intervention on insulin, leptin/adiponectin, and lipids.

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**Principal Investigator:** Emily Tonorezos (Memorial Sloan Kettering Cancer Center)

**Title:** Diet and insulin resistance in survivors of childhood leukemia

**Dates of Funding:** 1/14 – 3/16

**Funding Source:** American Institute for Cancer Research

**Award:** \$165,000

**Study Aims:** 1) Determine the effectiveness of a remotely delivered diet and physical activity intervention among obese ALL survivors, 2) Calculate the effect of the diet and physical activity intervention on insulin, leptin/adiponectin, and lipids.

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**Principal Investigator:** Sogol Mostoufi-Moab (University of Pennsylvania)

**Title:** Bone Deficits and Excess Adiposity after Pediatric Bone Marrow Transplantation

**Dates of Funding:** 6/13 – 5/18

**Funding Source:** National Institutes of Health (K07 CA166177)

**Award:** \$153,281

**Study Aims:** Among survivors of HSCT to characterize changes in bone density and structure, body composition and fat distribution, and associated risk factors and outcomes.

---

**Principal Investigator:** Alan Geller (Harvard School of Public Health)

**Title:** Advancing Survivors Knowledge About Skin Cancer (ASK)

**Dates of Funding:** 5/13 – 4/18

**Funding Source:** National Institutes of Health (R01 CA175231)

**Award:** \$4,117,427

**Study Aims:** (1) Determine the impact of a patient activation and education intervention with and without physician education and teledermatology on skin cancer early detection practices and (2) Determine the impact of patient activation and education on utilization.

---

**Principal Investigator:** Karen Effinger (Stanford University)

**Title:** Longitudinal Evaluation of Health Status in Survivors of Pediatric Astrocytoma

**Dates of Funding:** 7/14 – 6/15

**Funding Source:** ASCO Conquer Cancer Foundation Young Investigator Award (YIA)

**Award:** \$50,000

**Study Aims:** To evaluate 1) Health status, 2) Chronic Health Conditions and 3) Treatment-related risk factors among survivors of astrocytoma.

---

**Principal Investigator:** Emily Tonorezos (Memorial Sloan Kettering Cancer Center)

**Title:** Diet and insulin resistance in survivors of childhood leukemia

**Dates of Funding:** 8/14 - 7/19

**Funding Source:** National Institutes of Health (R01)

**Award:** \$3,220,769

**Study Aims:** 1) Determine the effectiveness of a remotely delivered diet and physical activity intervention among obese ALL survivors, 2) Calculate the effect of the diet and physical activity intervention on insulin, leptin/adiponectin, and lipids.

---

**Principal Investigator:** Maria Gramatges (Baylor College of Medicine)

**Title:** Shortened telomere length and defects in telomere maintenance associated with thyroid second malignant neoplasm in childhood cancer survivors

**Dates of Funding:** 9/15 - 6/19

**Funding Source:** National Institutes of Health (R01)

**Award:** \$1,444,716

**Study Aims:** 1) Determine whether SNPs associated with telomere maintenance are enriched in survivors with thyroid SMN (GWAS), 2) To look at impact of defects in telomere maintenance genes upon telomerase function.

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## Ancillary Studies: Active (continued)

**Principal Investigator:** Smita Bhatia (City of Hope)

**Title:** Developmental HyperActive Ras Tumor SPORE, (Subsequent Malignant Neoplasms among individuals with NF1)

**Dates of Funding:** 7/15 - 6/20

**Funding Source:** National Institutes of Health (SPORE)

**Award:** \$2,300,000

**Study Aims:** 1) to implement effective targeted molecular therapies for neoplasms and cancers characterized by NF1 mutations by conducting integrated, mechanistically based translational research. 2) to describe risk of SMNs and demographic/therapeutic factors associated with SMNs in individuals with NF1 and primary cancer.

---

**Principal Investigator:** I-Chan Huang (St. Jude Children's Research Hospital)

**Title:** Symptom Progress and Adverse Health Outcomes in Adult Survivors of Childhood Cancer

**Dates of Funding:** 12/15 - 11/17

**Funding Source:** National Institutes of Health (R21)

**Award:** \$489,133

**Study Aims:** 1) To investigate individual symptom categories and clusters across multiple time points  
2) To investigate the prognostic value of symptoms for developing chronic conditions.

---

**Principal Investigator:** Jennifer Yeh (Harvard School of Medicine)

**Title:** Improving Cancer Screening Guidelines for Survivors of Childhood Cancer

**Dates of Funding:** 7/16 - 6/20

**Funding Source:** American Cancer Society

**Award:** \$825,000

**Study Aims:** 1) Develop a microsimulation model of the natural history of late-effects among childhood cancer survivors; 2) Use the model to project the disease burden, in terms of morbidity and mortality, associated with late-effects among treatment-exposure subgroups; and 3) Assess the comparative effectiveness (and cost-effectiveness) of recommended screening strategies for secondary breast and colorectal cancers to improve long-term outcomes among at-risk survivors.

---

**Principal Investigator:** Liang Zhu (St. Jude Children's Research Hospital)

**Title:** New Methods to Address Dilemmas in Mixed Recurrent-event and Panel-count data

**Dates of Funding:** 7/16 - 6/18

**Funding Source:** National Institutes of Health (R21)

**Award:** \$501,312

**Study Aims:** To develop semi-parametric methods for regression analysis for mixed recurrent-event data with a terminal event and compare them with alternative methods by simulation studies for application to CCSS data.

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**Principal Investigator:** Yan Yuan (University of Alberta)

**Title:** Risk Prediction Model of Premature Menopause in Childhood Cancer Survivors

**Dates of Funding:** 7/16 - 12/18

**Funding Source:** Canadian Institutes of Health Research

**Award:** \$179,858

**Study Aims:** To develop a prediction model for early menopause.

---

**Principal Investigator:** Eric Chow (University of Washington)

**Title:** Communicating Health Issues and Improving Coordination with Primary Care (CHIIP)

**Dates of Funding:** 3/17 - 2/22

**Funding Source:** National Institutes of Health (R01)

**Award:** \$3,720,495

**Study Aims:** 1) Determine prevalence of under diagnoses and under treatment of traditional cardiovascular risk factors, 2) Randomized controlled intervention to improve risk factors, 3) Determine barriers that lead to under diagnosis and under treatment.

---

**Principal Investigator:** Lennie Wong (City of Hope)

**Title:** Cost effectiveness of breast cancer screening guidelines for female survivors of pediatric cancers

**Dates of Funding:** 7/17 - 6/20

**Funding Source:** American Cancer Society

**Award:** \$527,000

**Study Aims:** 1) Examine the cost-effectiveness of 1) annual clinical breast examination, 2) annual breast tomosynthesis vs. MRI as adjunct to mammography.

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## Ancillary Studies: Active (continued)

**Principal Investigator:** Yutaka Yasui, Jinghui Zhang (St. Jude Children's Research Hospital)

**Title:** Late Effects Prediction using Clinical Phenotypes and Whole Genome Sequencing

**Dates of Funding:** 4/17 - 3/22

**Funding Source:** National Institutes of Health (RO1)

**Award:** \$3,457,455

**Study Aims:** 1) Build individual risk prediction models with the SJLIFE cohort for 11 outcomes including meningioma, basal cell carcinoma, and multiple subsequent neoplasms, 2) Validate the risk prediction models in a larger cohort study with higher SN counts (CCSS).

---

**Principal Investigator:** Liang Zhu (University of Texas MD Anderson)

**Title:** Statistical Analysis for Mixed Outcome Measures in Recurrent Event Studies

**Dates of Funding:** 8/17 - 7/19

**Funding Source:** National Cancer Institute (R03)

**Award:** \$89,412

**Study Aims:** Develop a likelihood-based semiparametric estimation method for regression analysis of mixed panel-binary and panel-count data.

---

**Principal Investigator:** Kevin Oeffinger (Duke University)

**Title:** EMPOWER II: Promoting Breast Cancer Screening in Women Who Survived Childhood Cancer

**Dates of Funding:** 4/18 - 3/22

**Funding Source:** National Institutes of Health (R01)

**Award:** \$3,072,928

**Study Aims:** To determine the efficacy of smart phone, text-based patient and physician activation to improve breast MRI and mammography screening rates.

---

**Principal Investigator:** Cecile Ronckers (Princess Maxima Center for Pediatric Oncology, Utrecht)

**Title:** Risk Factors for Female Breast Cancer After Treatment for Childhood and Adolescent Cancer: An Individual Patient Data Analysis

**Dates of Funding:** 7/18 - 6/21

**Funding Source:** Kika Foundation

**Award:** \$369,763

**Study Aims:** 1) Establish an internationally pooled and harmonized database for breast cancer outcomes, 2) Answer three questions identified by the International Harmonization Guidelines for risk for subsequent breast cancer including risk <20Gy, associated with anthracycline exposure and attained age >50 years.

---

**Principal Investigator:** Lucie Turcotte, University of Minnesota

**Title:** Breast Cancer after Treatment for Childhood Cancer

**Dates of Funding:** 9/18 - 8/22

**Funding Source:** National Institutes of Health (K08)

**Award:** \$714,138

**Study Aims:** 1) Quantify OS and EFS among CCSS participants with breast cancer and compare with SEER cohort of women with primary breast cancer, 2) Compare prescribed treatment and breast cancer treatment-related toxicity between CCSS participants with breast cancer and a comparison cohort of women with primary breast cancer, 3) Perform semi-structured interviews with medical and radiation oncologists to understand drivers of treatment decision-making, and use responses to create a survey for distribution to medical and radiation oncologists.

---

**Principal Investigator:** Jennifer Yeh (Harvard School of Medicine)

**Title:** Genetic Testing to Guide Pediatric Cancer Care and Follow-up: Using Anthracycline-Associated Cardiomyopathy as a Model for the Future

**Dates of Funding:** 8/18 - 8/23

**Funding Source:** National Institutes of Health (Provocative Questions R01)

**Award:** \$2,079,924

**Study Aims:** 1) Determine the clinical utility of a simulation model of cardiotoxicity genetic risk factors in guiding cancer care, 2) Assess how consideration of genetic markers can improve follow-up cardiomyopathy screening recommendations for at-risk survivors.

---

## Ancillary Studies: Active (continued)

**Principal Investigator:** Elyse Park (Harvard School of Medicine)

**Title:** Developing a Health Insurance Navigation Program for Childhood Cancer Survivors

**Dates of Funding:** 1/19- 12/21

**Funding Source:** American Cancer Society

**Award:** \$720,000

**Study Aims:** 1) To develop a psychoeducational health insurance navigation program (HINP), 2) To conduct a pilot randomized trial of the HINP, 3) To refine the HINP program for future use.

## Ancillary Studies: Proposed

**Principal Investigator:** I-Chan Huang, Justin Baker (St. Jude Children's Research Hospital)

**Title:** Developing a Patient Reported Outcomes Version of the CTCAE for Survivors (PRO-CTCAE-SCC)

**Proposed Funding Source:** National Institutes of Health (R01)

**Study Aims:** To conduct item creation, selection and validation of a PRO-CTCAE-SCC based on the current patient-reported outcomes version of the Common Terminology Criteria for Adverse Events.

**Status:** Submitted October 2018, 6<sup>th</sup> percentile score, Awaiting council

**Principal Investigator:** Tara Brinkman (St. Jude Children's Research Hospital)/Kevin Krull (St. Jude Children's Research Hospital)

**Title:** Impact of eHealth intervention for insomnia on late effects of childhood cancer

**Proposed Funding Source:** National Institutes of Health (R01)

**Study Aims:** To assess the impact of insomnia treatment on neurocognitive impairment, symptoms of emotional distress, and indices of cardiovascular health in survivors of childhood cancer.

**Status:** Submitted January 2019, 1<sup>st</sup> percentile; Awaiting council

**Principal Investigator:** Monica Gramatges, Philip Lupo, Kiri Ness (Baylor College of Medicine and St. Jude Children's Research Hospital)

**Title:** Biological Mechanisms of Accelerated Aging Evidenced as Frailty in Survivors of Childhood Leukemia

**Proposed Funding Source:** National Institutes of Health (Provocative Questions R01)

**Study Aims:** To assess the associations between physiologic frailty and telomere length (Aim 1), systemic inflammation (Aim 2), DNA methylation (Aim 3).

**Status:** Submitted June 2018, unscored, Submitted as a new R01 April 2019

**Principal Investigator:** Tara Henderson (Univ. of Chicago)/Angela Bradbury (Univ. of Pennsylvania)

**Title:** Improving Delivery of Genetic Services to High Risk Childhood Cancer Survivors: A Randomized Study of Remote Genetic Services Versus Usual Care

**Proposed Funding Source:** National Institutes of Health (R01)

**Study Aims:** 1) To Evaluate the efficacy of remote telegenetic services (telephone or videoconferencing) compared to usual care to increased uptake of genetic counseling, genetic testing and identification of germline genetic mutation carriers, 2) To evaluate the efficacy of real time video conferencing to provide greater knowledge and recall of results, decrease distress and improved satisfaction with genetic services compared to telephone delivery.

**Status:** Submitted October 2017, unscored. Submitted as a new R01 June 2018, 20<sup>th</sup> percentile, Resubmitted March 2019

**Principal Investigator:** Wendy Cozen (University of Southern California)

**Title:** The Immunobiology of Long-Term Survival in Twins Discordant for Childhood Cancer

**Proposed Funding Source:** National Institutes of Health (R01)

**Study Aims:** 1) Define immunologic alterations associated with pediatric leukemia / lymphoma survivorship (encompassing the cancer and its treatment by quantifying 16 systemic biomarkers of immune activation and inflammation in pediatric cancer survivors and their unaffected identical co-twins as controls. 2) Determine whether pediatric survivors have accelerated epigenetic aging compared to their unaffected twins, 3) Determine whether the gut microbiome is adversely altered in survivors.

**Status:** Submitted October 2017, 40<sup>th</sup> percentile score; Resubmitted April 2019



## Ancillary Studies: Proposed (continued)

**Principal Investigator:** Matt Ehrhardt/Melissa Hudson (St. Jude Children's Research Hospital)

**Title:** Evaluation of Cardiovascular Health Outcomes among Survivors Study II

**Proposed Funding Source:** National Institutes of Health (U01)

**Study Aims:** 1) Determine the effectiveness of a smartphone-based patient activation intervention and PCP activation on completion of echocardiogram screening

**Status:** Submitted March 2019

**Principal Investigator:** Irene Su (University of California San Diego)

**Title:** A SMART approach to increasing reproductive health care in female young adult survivors of childhood cancer

**Proposed Funding Source:** National Institutes of Health (U01)

**Study Aims:** To evaluate the efficacy of a mobile-friendly, individualized reproductive health survivorship care plan (SCP-R) for increasing rates of fertility, family planning, and/or preconception counseling among female young adult survivors of childhood cancer who are experiencing a reproductive health need.

**Status:** Submitted March 2019

**Principal Investigator:** Liang Zhu (University of Texas MD Anderson)

**Title:** Innovative Statistical Analysis for Genome-Wide Data with Interval-Censored Outcomes of Oral Health

**Proposed Funding Source:** National Institutes of Health (R03)

**Study Aims:** Develop nonparametric screening method for ultrahigh-dimensional interval-censored data

**Status:** Submitted February 2019

**Principal Investigator:** Eileen Dolan (University of Chicago)

**Title:** GWAS for discovery of genetic associations with tinnitus and hearing loss

**Proposed Funding Source:** National Institutes of Health (R21)

**Study Aims:** To identify genetic variation associated with cisplatin-induced ototoxicity in the Platinum Study and de novo ototoxicity in CCSS and eMERGE cohorts using genome-wide SNP- and gene-level (PrediXcan) analyses and meta-analyses.

**Status:** Submitted October 2018, Resubmission planned

## Ancillary Studies: Unfunded

**Principal Investigator:** Melissa Hudson (St. Jude Children's Research Hospital)

**Title:** Promoting Health Monitoring After Childhood Cancer

**Proposed Funding Source:** National Institutes of Health

**Study Aims:** Conduct a randomized trial to test generic health risk promotion versus tailored health risk promotion with proactive counseling to increase the rate of successful screening according to risk-based recommendations.

**Principal Investigator:** Debra L. Friedman (Fred Hutchinson Cancer Research Center)

**Title:** A Web-Based Approach to Familial Cancer Risk

**Proposed Funding Source:** Lance Armstrong Foundation

**Study Aims:** Develop and test a web-based strategy for the investigation of familial cancers and second cancer risks among pediatric cancer survivors.

**Principal Investigator:** Jin-Shei Lai (Northwestern University)

**Title:** Cancer Fatigue Monitoring from Childhood into Adulthood

**Proposed Funding Source:** National Institutes of Health (Application submitted to RFA)

**Study Aims:** Development of a valid, lifespan assessment of fatigue.

**Principal Investigator:** Anne Lown (San Francisco State University)

**Title:** Alcohol Consumption Among Childhood Cancer Survivors

**Proposed Funding Source:** National Institutes of Health (K07 application)

**Study Aims:** Describe the prevalence and risk factors for survivors and sibling drinking and health-risk behaviors over time.



## Ancillary Studies: Unfunded (continued)

**Principal Investigator:** Craig Lustig (Children's Cause for Cancer Advocacy)  
**Title:** Childhood Cancer Survivor Study Partners  
**Proposed Funding Source:** National Institutes of Health (Application submitted for RFA)  
**Study Aims:** Establish a formal collaboration between an informed, responsible core of CCSS participants and investigators.

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**Principal Investigator:** Andrea Patenaude (Dana Farber Cancer Institute)  
**Title:** Understanding Genetic Medicine: Towards a Guide for Survivors  
**Proposed Funding Source:** Lance Armstrong Foundation  
**Study Aims:** To evaluate the potential genetic factors that may modify risk for adverse late effects in childhood cancer survivors.

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**Principal Investigator:** Qian Lu (UCLA)  
**Title:** A Longitudinal Study of Pain in Long-term Survivors of Childhood Cancer  
**Proposed Funding Source:** Lance Armstrong Foundation  
**Study Aims:** To determine the potential impact of chronic pain on overall quality of life among cancer survivors.

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**Principal Investigator:** Richard Sposto (Children's Hospital Los Angeles)  
**Title:** Statistical Models for Risk/Benefit Analysis of Targeted Treatment Strategies in Childhood Cancer  
**Proposed Funding Source:** National Institutes of Health (R21)  
**Study Aims:** Statistical/methodological research addressing issues of acute toxicities and long-term sequelae of therapy, potentially providing new approaches for predicting the potential treatment-specific risks within pediatric cancer survivor populations.

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**Principal Investigator:** Whitney Witt (University of Wisconsin)  
**Title:** The Impact of Childhood Cancer Survivorship on Parental Psychosocial Outcomes, Health, and Aging  
**Proposed Funding Source:** National Institutes of Health (R01)  
**Study Aims:** Identify the factors related to poor psychosocial outcomes (stress and family burden) among parents of long-term survivors of childhood cancer.

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**Principal Investigator:** Jaya Satagopan (Memorial Sloan-Kettering Cancer Center)  
**Title:** Evaluation of Statistical Interactions in Cancer Epidemiology Studies  
**Proposed Funding Source:** National Institutes of Health (R01)  
**Study Aims:** To expand upon previous work and develop novel methods for evaluating interactions through investigating parametric link functions, shrinkage methods, and removable interactions, with subsequent software development.

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**Principal Investigator:** Richard Sposto (Children's Hospital Los Angeles)  
**Title:** Personalized Therapeutic Decision-making for Childhood Cancer  
**Proposed Funding Source:** Patient-Centered Outcomes Research Institute (PCORI)  
**Study Aims:** Statistical/methodological research addressing issues of acute toxicities and long-term sequelae of therapy, potentially providing new approaches for predicting the potential treatment-specific risks within pediatric cancer survivor populations.

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**Principal Investigator:** Javier Blanco (University of Buffalo)  
**Title:** Characterization of Cardiac Mitochondrial DNA in Donors with Down Syndrome  
**Proposed Funding Source:** National Institutes of Health (K03)  
**Study Aims:** To understand the specific alterations in cardiac mitochondrial DNA among individuals with and without Down Syndrome to inform future avenues of research to identify those factors associated with cardiotoxicity.

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**Principal Investigator:** Smita Bhatia (City of Hope) and Yutaka Yasui (University of Alberta)  
**Title:** Genetic predisposition to non-malignant adverse events in survivors of Pediatric Hematological Malignancies  
**Proposed Funding Source:** Leukemia and Lymphoma Society  
**Study Aims:** 1) Identify germline variants associated with cognitive deficits, CHF, CAD, stroke, ovarian failure, and hypothyroidism, 2) Examine role of gene-environment interactions, 3) Replication of top SNPs

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## Ancillary Studies: Unfunded (continued)

**Principal Investigator:** Jennifer Yeh (Harvard School of Medicine)

**Title:** Refining risk-based follow-up guidelines to improve childhood cancer survivorship

**Proposed Funding Source:** National Institutes of Health (R01)

**Study Aims:** 1) Develop a childhood cancer survivor policy model, 2) Identify risk subgroups for identifying lifelong burden of disease

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**Principal Investigator:** Kenneth Offit (Memorial Sloan Kettering Cancer Center) and Charles Mullighan (St. Jude)

**Title:** Genetic Susceptibility to Acute Lymphoblastic Leukemia

**Proposed Funding Source:** National Institutes of Health (R01)

**Study Aims:** (1) To identify novel ALL susceptibility genes using massively parallel sequencing of familial ALL kindreds, (2) To identify underlying genetic susceptibility factors for the development of second and subsequent cancers in ALL, and (3) To determine the extent to which germline deleterious variants contribute to sporadic ALL.

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**Principal Investigator:** Sabine Mueller (University of California San Francisco)

**Title:** Stroke in Survivors of Childhood Cancer

**Proposed Funding Source:** National Institutes of Health (R01)

**Study Aims:** 1) Direct MRI assessment of large/small vessel stroke, 2) Prevalence and factors for microbleeds

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**Principal Investigator:** Alan Geller (Harvard School of Public Health)

**Title:** Advancing Skin Cancer Screening Practices among Survivors of Childhood Cancer and Skin Cancer (ASK2)

**Proposed Funding Source:** National Institutes of Health, RO1

**Study Aims:** Among 450 CCSS participants with a diagnosis of skin cancer, determine the impact of a Patient Activation and Education intervention (PAE) (tailored print materials, text messages, and tailored phone calls) compared with generic print materials and text messages on skin cancer early detection and prevention practices measured at 6 and 12 months.

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**Principal Investigator:** Jennifer Yeh (Harvard School of Medicine)

**Title:** Identifying opportunities to Improve Childhood Cancer Survival with Genetic Testing

**Proposed Funding Source:** Alex's Lemonade Stand Foundation

**Study Aims:** Evaluate how genetic testing may improve risk stratification

**Status:** Submitted December 2015, unfunded

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**Principal Investigator:** Jennifer Yeh (Harvard School of Medicine)

**Title:** Identifying opportunities to Improve Childhood Cancer Survival with Genetic Testing

**Proposed Funding Source:** NIH R01

**Study Aims:** Evaluate how genetic testing may improve risk stratification

**Status:** Submitted February 2016, unfunded

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**Principal Investigator:** Elyse Park (Harvard School of Medicine)

**Title:** Understanding and improving health insurance coverage experiences of childhood cancer survivors

**Proposed Funding Source:** American Cancer Society

**Study Aims:** 1) Examine longitudinal changes in health insurance coverage following implementation of the ACA, 2) Examine health insurance challenges

**Status:** Scored Excellent, Resubmission May 2016, unfunded

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**Principal Investigator:** Jennifer Yeh (Harvard School of Medicine)

**Title:** Identifying opportunities to Improve Childhood Cancer Survival with Genetic Testing

**Proposed Funding Source:** Collaborative Pediatric Cancer Research Award

**Study Aims:** Evaluate how genetic testing may improve risk stratification

**Status:** Submitted January 2017, Unfunded

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**Principal Investigator:** David Brenner and Sally Amundson (Columbia University)

**Title:** Validation of interactome-based biomarkers of inherited susceptibility to radiation-induced carcinogenesis

**Proposed Funding Source:** NIH U01

**Study Aims:** To determine if the pattern of master regulator genes underlying the susceptibility to radiation-induced cancer in an Israeli cohort will be broadly generalizable to radiation-associated second cancers occurring in survivors of childhood cancer.

**Status:** Unfunded

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## Ancillary Studies: Unfunded (continued)

**Principal Investigator:** Tara Henderson (Univ. of Chicago)/Angela Bradbury (Univ. of Pennsylvania)

**Title:** Return of Genomic Results to Research Participants

**Proposed Funding Source:** National Institutes of Health R01

**Study Aims:** To evaluate the uptake of web-based education and return of genomic results

**Status:** Submitted February 2016, 50<sup>th</sup> percentile. Resubmitted October 2016, Unfunded

**Principal Investigator:** Jennifer Yeh (Harvard School of Medicine)

**Title:** Identifying opportunities to Improve Childhood Cancer Survival with Genetic Testing

**Proposed Funding Source:** Pablove Foundation Grant

**Study Aims:** Evaluate how genetic testing may improve risk stratification

**Status:** Submitted April 2017, Unfunded

**Principal Investigator:** Flora van Leeuwen (Netherlands Cancer Institute)

**Title:** Molecular markers to improve treatment-related accelerated aging in relation to late effects among survivors of Hodgkin Lymphoma

**Proposed Funding Source:** Dutch Cancer Society

**Study Aims:** Assess whether telomere length and genetic variants linked with longevity and telomere length are associated with risk of developing multiple SMNs and cardiac events.

**Status:** Submitted March 2017, Unfunded

**Principal Investigator:** Kathy Ruble (John Hopkins University)/Lee Ritterband (University of Virginia)/Kevin Krull (St. Jude Children's Research Hospital)

**Title:** eHealth Insomnia Intervention in Childhood Cancer Survivors: Impact on Long-Term Complications

**Proposed Funding Source:** NIH R01

**Study Aims:** To assess the impact of insomnia treatment on neurocognitive impairments in childhood cancer survivors and the impact of insomnia treatment on anxiety, depression, fatigue, and indices of cardiovascular health in CCS.

**Status:** Submitted November 2016, Unscored

**Principal Investigator:** Liang Zhu (University of Texas Health Science Center)

**Title:** Analyzing Cancer Studies with Complex Recurrent Event Outcomes

**Proposed Funding Source:** NIH R01

**Study Aims:** To develop semi-parametric methods for basic regression analysis (Aim 1), to address complex features of analysis (Aim 2) and for high/ultrahigh-dimensional (Aim 3) mixed recurrent event data.

**Status:** Submitted June 2017, Unscored

**Principal Investigator:** Danielle Friedman, Memorial Sloan Kettering Cancer Center

**Title:** Metabolic Syndrome after Total Body Irradiation

**Proposed Funding Source:** American Cancer Society

**Study Aims:** 1) Determine the relative risk of developing diabetes mellitus, hypertension, dyslipidemia, and obesity in childhood cancer survivors treated with TBI between 1970-1999 (n=571), when compared to: (a) survivors treated with chemotherapy and/or surgery alone (n=5,434) and (b) a sibling comparison group (n=5,059).

**Status:** Submitted April 2018, Scored as "Outstanding", Unfunded

**Principal Investigator:** Todd Gibson/Kiri Ness (St. Jude Children's Research Hospital)

**Title:** Prevalence and Risk of Frailty in Survivors of Childhood Cancer

**Proposed Funding Source:** National Institutes of Health (R01)

**Study Aims:** 1) To determine the prevalence of frailty and pre-frailty, 2) To identify associations between treatment exposures and frailty, and 3) To evaluate associations with quality of life.

**Status:** Submitted October 2017, 33<sup>rd</sup> percentile score; Resubmitted, 29th percentile score; Submitted as new R01, August 2018, Unscored

**Principal Investigator:** Philip Lupo (Baylor College of Medicine)

**Title:** Developing a Clinical and Genetic Risk Prediction Model for Diabetes Mellitus among Survivors of Childhood Cancer

**Proposed Funding Source:** V Foundation

**Study Aims:** To develop a Clinical and Genetic Risk Prediction Model for Diabetes Mellitus

**Status:** Submitted October 2018, Unfunded

## Ancillary Studies: Unfunded (continued)

**Principal Investigator:** Stephanie Dixon (St. Jude Children's Research Hospital)

**Title:** Long-term outcomes of survivors of childhood Acute Lymphoblastic Leukemia (ALL) across 30-years of treatment: a report from the Childhood Cancer Survivor Study

**Proposed Funding Source:** Conquer Cancer, Career Development Award

**Study Aims:** To evaluate late mortality, SMNs and chronic health conditions in survivors of childhood ALL by treatment exposure group and era.

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**Principal Investigator:** James Bates (University of Florida)

**Title:** Influence of Radiotherapy Dose to Cardiac Substructures on Cardiac Risk in Long-Term Survivors.

**Proposed Funding Source:** Conquer Cancer, Career Development Award

**Study Aims:** Develop a heart phantom to include cardiac substructures (including, but not limited to, the left ventricle, right ventricle, left atrium, right atrium, valvular structures, and coronary arteries) such that mean and maximum doses can be calculated for those substructures.

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## CCSS Career Development Award Winners

Category	Awardee	Application Title	CCSS Working Group	Primary Mentor	Status
<b>2013</b>					
Junior Faculty	Sogol Mostoufi-Moab, MD Children's Hospital of Philadelphia	Overall risk of chronic endocrine disorders in adult survivors of childhood cancer	Chronic Disease	Mary Leonard	J Clin Oncol 2016
<b>2014</b>					
Junior Faculty	Philip Lupo, PhD Baylor College of Medicine	Epigenomic profiling of metabolic outcomes in childhood leukemia survivors	Genetics	Smita Bhatia	Abstract Presented, Manuscript Submitted
Junior Faculty	Rebecca Howell, PhD UT MD Anderson Cancer Center	Radiation dose reconstruction methods for intensity modulated radiation therapy	Second Malignancies	Marilyn Stovall	Analysis Underway
Trainee	Giselle Perez, PhD Massachusetts General Hospital	Mental healthcare service availability and utilization among childhood cancer survivors	Psychology and Cancer Control	Elyse Park	J Cancer Surviv 2018
Trainee	Melissa Schapiro, MD St. Louis Children's Hospital	Cognitive and academic difficulties in survivors of head/neck rhabdomyosarcoma	Psychology	Robert Hayashi	Manuscript Drafted
<b>2015</b>					
Junior Faculty	Danielle Novetsky Friedman, MD, Memorial Sloan Kettering	Impact of radiation dose to the pancreas on subsequent risk of diabetes mellitus	Chronic Disease	Charles Sklar	Abstract Presented, Manuscript Drafted
Junior Faculty	Adam Esbenshade, MD Vanderbilt University	Using the Cumulative Illness Rating Scale to characterize the burden of chronic conditions	Chronic Disease	Kirsten Ness	Abstract Presented, Manuscript Drafted
Trainee	Douglas Fair, MD University of Utah	Health care financial burden and missed opportunities for care	Chronic Disease	Anne Kirchhoff	Analysis Underway
Trainee	Aurelie Weinstein, Georgia State University	Predictors and outcomes of personal strengths in young adult cancer survivors	Psychology	Chris Heinrich	Psychooncology 2018

Category	Awardee	Application Title	CCSS Working Group	Primary Mentor	Status
International Trainee	Miranda Fidler, University of Birmingham, UK	Comparison of risks for mortality and subsequent cancers in the CCSS and the BCCSS	Chronic Disease	Mike Hawkins	ASCO Oral Presentation
<b>2017</b>					
Junior Faculty	Ralph Salloum, MD, Cincinnati Children's Hospital Medical Center	Medulloblastoma and PNET outcomes across three decades of diagnosis	Chronic Disease	Maryam Fouladi Greg Armstrong	Abstract Presented, JClin Oncol 2019
Trainee	Stephanie Vuotto, PhD, St. Jude Children's Research Hospital	Psychological distress, neurologic morbidity and functional independence among adult survivors treated with CNS-directed therapies	Psychology	Tara Brinkman	Abstract Presented, Manuscript Drafted
<b>2018</b>					
Junior Faculty	Nicole Alberts, PhD St. Jude Children's Research Hospital	Chronic pain in adult survivors of childhood cancer: Utilization of the CCSS mHealth platform in assessing pain and wearable technology	Psychology	Greg Armstrong	Concept Approved
Trainee	Kerri Beckett Medical College of Wisconsin	Long-term follow-up of survivors of osteosarcoma	Chronic Disease	Cindy Schwartz	Concept Approved
Trainee	Kari Bjornard St. Jude Children's Research Hospital	The impact of chronic health conditions on sexual dysfunction in female childhood cancer survivors	Chronic Disease	Kiri Ness	Concept Approved
<b>2019</b>					
Junior Faculty	Cindy Im, PhD, University of Alberta	Genetic risk prediction profiles for fracture risk among childhood cancer survivors	Genetics	Yutaka Yasui	Concept Approved
Trainee	Suman Shrestha, MS, MSc UT MD Anderson Cancer Center	Enhancing heart model of CCSS age-specific computational phantoms by defining cardiac substructures and dose reconstruction	Chronic Disease	Rebecca Howell	Project Underway

## CCSS Trainee List

Trainee/Mentee	Training Experience	Current Position	First Authored CCSS Publications
Nina Kadan-Lottick, MD, MSPH	Post-doctoral Fellowship	Associate Professor Division of Pediatric Hematology-Oncology Yale University New Haven CT	JAMA 2002 Epidemiology 2003 Blood cancer 2006 J Clin Oncol 2008 J Natl Cancer Inst 2010
Brad Zebrack, PhD	Post-doctoral Fellowship	Associate Professor School of Social Work University of Michigan Ann Arbor, MI	Pediatr 2002 J Clin Oncol 2004 Pediatr Blood Cancer 2007 Psychooncology 2012
Pauline Mitby, MPH	Graduate Training	Clinical Research Manager Children's Minnesota Research Institute Minneapolis, MN	Cancer 2003
Rajaram Nagarajan, MD, MS	Post-doctoral Fellowship and Graduate Training	Associate Professor Department of Pediatrics Cincinnati Children's Hospital Cincinnati, OH	Cancer 2003 Br J Cancer 2004 J Cancer Surviv 2009 Cancer 2011
Carrie M. Brownstein, MD	Post-doctoral Fellowship	Senior Clinical Scientist and Sr. Associate Clinical Director Roche Pharmaceuticals Assistant Clinical Professor Department of Pediatric Hematology-Oncology New York-Presbyterian/Columbia New York, NY	J Clin Endocrinol Metab 2004
Lisa Kenney, MD, MPH	Post-doctoral Fellowship	Assistant Professor Department of Pediatrics Harvard Medical School Pediatric Oncology Dana-Farber Cancer Institute Boston MA	Ann Intern Med 2004
Elyse Park, PhD	Graduate Training	Associate Professor Harvard Medical School Department of Psychiatry Massachusetts General Hospital Boston MA	J Clin Oncol 2005 Prev Med, 2006 J Cancer Surviv, 2012 J Clin Oncol, 2015 JAMA Intern Med 2018
Sharon Castellino, MD, MS	Graduate Training	Associate Professor Department of Pediatrics Emory University Atlanta, GA	J Clin Oncol 2005 Blood 2011
Joanna Perkins, MD, MS	Post-doctoral Fellowship and Graduate Training	Hematology-Oncology Children's Hospital of Minnesota Minneapolis, MN	J Clin Oncol 2005 Cancer 2014
Judy Punyko, PhD	Graduate Training	State Maternal and Child Health Epidemiologist Minnesota Department of Health St Paul, MN	Pediatr Blood Cancer 2005
Wassim Chemaitilly, MD	Post-doctoral Fellowship	Associate Member Endocrinology St. Jude Children's Research Hospital Memphis, TN	J Clin Endocrinol Metab 2006
Mylene Bassal, MD	Post-doctoral Fellowship	Assistant Member Department of Pediatrics University of Ottawa Ottawa, Canada	J Clin Oncol 2006
Berrin Ergun-Longmire, MD	Post-doctoral Fellowship	Assistant Professor Division of Pediatric Endocrinology Robert Wood Johnson Medical School New Brunswick, NJ	J Clin Endocrinol Metab 2006



Trainee/Mentee	Training Experience	Current Position	First Authored CCSS Publications
Cecile Ronckers, PhD	Post-doctoral Fellowship	Senior Investigator Princess Maxima Center for Pediatric Oncology Utrecht, Netherlands	Radiat Res 2006
Tara Henderson, MD, MPH	Fellowship and Graduate Training	Associate Professor Department of Pediatrics University of Chicago Chicago, IL	JNCI 2007 Ann Intern Med, 2012 Int J Radiat Oncol Bio Phys, 2012 J Clin Oncol 2015
Eric Chow, MD, MPH	Fellowship and Graduate Training	Medical Director Pediatric Cancer Long Term Follow-up Program Seattle Children's Hospital Seattle, WA	J Pediatr 2007 Pediatr Blood Cancer 2008 Pediatr Blood Cancer 2009 Pediatr Blood Cancer 2013 J Clin Oncol 2015 Lancet Oncol 2017 J Clin Oncol 2018
Todd Florin, MD	Medical Student	Associate Professor Department of Pediatrics Northwestern Univ, Feinberg School of Med Chicago, IL	CEBP 2007
Kris Ann Schultz, MD, MS	Fellowship and Graduate Training	Hematology-Oncology Children's Hospital of Minnesota Minneapolis, MN	J Clin Oncol 2007 Pediatr Blood Cancer 2014
Jenny Pang, MD, MPH	Fellowship and Graduate Training	Clinical Assistant Professor School of Public Health University of Washington Seattle, WA	Pediatr Blood Cancer 2008
Irina Dinu, PhD	Post-doctoral Fellowship	Assistant Professor Department of Public Health Sciences University of Alberta Edmonton, Alberta	Pediatr Blood Cancer 2008
Daniel Mulrooney, MD, MS	Fellowship and Graduate Training	Associate Member St. Jude Children's Research Hospital Memphis, TN	Sleep 2008 Cancer 2008 Br Med J 2009
Elizabeth Bluhm, MD, MPH	Post-doctoral Fellowship	Clinical Assistant Professor GW Medical Faculty Association Washington, DC	Blood 2008
Anne Lown, DrPH	Post-doctoral Fellowship	Associate Professor School of Nursing UCSF San Francisco, CA	Addiction 2008 Psychooncology 2013
Edward Garmey, MD	Post-doctoral Fellowship	Chief Medical Officer and Senior Vice President Cerulean Pharma Inc. Cambridge, MA	J Clin Oncol 2008
Natasha Buchanan, PhD	Post-doctoral Fellowship	Behavioral Scientist Centers for Disease Control Atlanta, GA	Cancer, 2009
Meagan Lansdale, MD	Medical Student	Assistant Professor UCSF School of Medicine San Francisco, CA	Cancer, 2009
Caroline Laverdiere, MD	Fellowship Training	Assistant Professor Department of Pediatrics University of Montreal Montreal, QC	JNCI 2009
Christopher Janson, MD	Medical Student	Assistant Professor Children's Hospital of Montefiore Albert Einstein College of Medicine Bronx, NY	CEBP2009

Trainee/Mentee	Training Experience	Current Position	First Authored CCSS Publications
Karen Wasilewski-Masker, MD, M.Sc.	Fellowship Training	Associate Professor Department of Pediatrics Emory University School of Medicine Atlanta, GA	JNCI 2009 J Cancer Surviv, 2014
Lisa Kahalley, PhD	Post-doctoral Fellowship	Assistant Professor Baylor College of Medicine Houston, TX	Nicotine Tob Res, 2010 Pediatr Blood Cancer, 2012
Beth Kurt, MD, MS	Fellowship and Graduate Training	Pediatric Oncologist Helen DeVos Children's Hospital Grand Rapids, MI	Pediatr Blood Cancer, 2011
Timothy Best, PhD	Graduate degree (PhD)	Medical Science Liaison Ipsen Chicago, IL	Nat Med, 2011
Anne Kirchhoff, PhD, MPH	Post-doctoral Fellowship	Associate Professor University of Utah Salt Lake City, UT	Med Care, 2010 CEBP, 2011 Cancer, 2011 Med Care, 2010 Support Care Cancer, 2013 J Natl Cancer Inst, 2015
Michele Montgomery, PhD	Graduate degree (PhD)	Assistant Professor University of Alabama Tuscaloosa, AL	J Cancer Surv 2011
Nancy Clanton, PhD	Post-doctoral training	Assistant Professor UT Health Science Center Memphis, TN	Cancer 2011
Kerri Nottage, MD	Fellowship training	Executive Medical Director Janssen Pharmaceutical Companies New York, NY	Blood 2011
Carmen Wilson, PhD	Post-doctoral Fellowship	Assistant Member St. Jude Children's Research Hospital Memphis, TN	Cancer 2012 JNCI 2013 CEBP 2014
Houda Boukheris, MD	Post-doctoral Fellowship	Cancer Epidemiologist University of Oran Algeria	Int J Radiat Oncol Biol Phys 2012
Tanya Watt, MD	Fellowship training	Assistant Professor UT Southwestern Dallas, TX	J Natl Cancer Inst, 2012
Julienne Brackett, MD	Fellowship training	Assistant Professor Texas Children's Hospital Houston, TX	Neuro Oncol 2012
Tien Huang, PhD	Post-doctoral Fellowship	Instructor University of Oklahoma Norman, OK	Pediatr Blood Cancer 2013
Lucie Turcotte, MD, MPH	Fellowship training	Assistant Professor University of Minnesota Minneapolis, MN	J Clin Oncol, 2015 JAMA 2017
Jeanne Steele, PhD	Post-doctoral Fellowship	Program Consultant Office of Health Improvement State of Minnesota	J Cancer Surviv 2013
Casey Daniel, PhD	Graduate degree (PhD)	Assistant Professor University of South Alabama Mobile, AL	Cancer 2015 Trials 2015
Prasad Gawade, PhD	Fellowship training	Observational Research Sr. Manager Amgen Thousand Oaks, CA	Am J Obstet Gynecol 2015
Sara Barton, MD	Assistant Professor	Reproductive Endocrinologist Colorado Center for Reproductive Medicine Denver, CO	Lancet Oncol 2013

Trainee/Mentee	Training Experience	Current Position	First Authored CCSS Publications
Stefan Essig, MD, PhD	Research Fellow	Research Associate University of Lucerne Lucerne, Switzerland	Lancet Oncol 2014
Pinki Prasad, MD, MPH	Fellowship training	Assistant Professor Louisiana State University New Orleans, LA	J Clin Oncol 2015
Karen Tsui, MD	Fellowship training	Assistant Professor Starship Hospital Auckland, New Zealand	Neuro Oncol 2014
Eugene Suh, MD	Fellowship training	Assistant Professor Loyola University Chicago, IL	Manuscript Submitted
Giselle Perez, PhD	Post-doctoral Fellowship	Instructor of Psychiatry Harvard Medical School Boston, MA	J Cancer Surviv 2018
Melissa Schapiro, MD	Fellowship training	Assistant Professor Memorial Sloan Kettering Cancer Center New York, NY	Analysis underway
Dava Szalda, MD	Fellowship training	Physician and Program Director Children's Hospital of Philadelphia Philadelphia, PA	Analysis underway
Elizabeth Feijen	Graduate Training	Fellow Princess Maxima Center for Pediatric Oncology Utrecht, The Netherlands	J Clin Oncol, 2015 JAMA Onc 2019
Huiru Dong, MSc	Graduate Training	Graduate Student University of Alberta Edmonton, Alberta, Canada	Am J Epidemiol 2015
Kelly Kenzik, PhD	Graduate Training	Assistant Professor University of Birmingham Birmingham, Alabama	Neuropsychology 2014
Douglas Fair, MD	Fellowship Training	Assistant Professor University of Utah Salt Lake City, UT	Analysis underway
Aurelie Weinstein	Graduate Training	Lecturer Georgia State University Smyrna, GA	Psycho-Oncology 2018
Miranda Fidler	Graduate Training	Research Scientist Alberta Health Services Calgary, AB, Canada	Analysis underway
Arin Madenci, MD	Fellowship Training	Fellow, Pediatric Surgery Boston Children's Hospital Boston, MA	J Clin Oncol 2015 J Clin Oncol 2018
Karen Effinger, MD	Fellowship Training	Assistant Professor Children's Hospital of Atlanta Atlanta, GA	Eur J Cancer 2018
Ryan Nipp, MD	Fellowship Training	Clinical Assistant in Med/Instructor Mass General Hospital Boston, MA	J Clin Oncol 2018
Stephanie Vuotto, PhD	Post-doctoral Fellowship	Assistant Professor College of Mount Saint Vincent New York, NY	Cancer 2016
Austin Brown, PhD	Graduate Training	Instructor Baylor College of Medicine Houston, TX	Analysis underway
Peter Asdhal, MD	Graduate Training	PhD Fellow Aarhus University Hospital Aarhus, Denmark	Analysis underway

Trainee/Mentee	Training Experience	Current Position	First Authored CCSS Publications
Daniel Zheng	Medical Student	Resident Physician Boston Children's Hospital Boston, MA	Cancer 2018
Lauren Daniel, PhD	Post-doctoral Fellowship	Assistant Professor Rutgers University Camden, NJ	Psycho-Oncology 2019
Yin Ting Cheung, PhD	Post-doctoral Fellowship	Assistant Professor Chinese University of Hong Kong Hong Kong, China	J Natl Cancer Inst 2018
James Bates, MD	Fellowship Training	Fellow, Radiation Oncology University of Florida Gainesville, FL	Manuscript Submitted
Matt Ehrhardt, MD	Fellowship Training	Assistant Member St. Jude Children's Research Hospital Memphis, TN	Manuscript Submitted
Kristen Stefanski	Fellowship Training	Physician Akron Children's Hospital Akron, OH	Manuscript Draft Complete
Stephanie Dixon	Fellowship Training	Fellow St. Jude Children's Research Hospital Memphis, TN	Manuscript Submitted
Kerri Beckett	Fellowship Training	Fellow Children's Hospital of Wisconsin Milwaukee, WI	Analysis underway
Kari Bjornard	Fellowship Training	Fellow St. Jude Children's Research Hospital Memphis, TN	Analysis underway
Valerie Arsenault	Fellowship Training	Fellow Hospital for Sick Kids Toronto, ON	Analysis underway
Caleb Nannes	Fellowship Training	Fellow Duke University Durham, NC	Analysis underway
Nisha Rathore	Fellowship Training	Fellow Texas Children's Hospital Houston, TX	Analysis underway
Ameera Fayad	Graduate Training	Student University of Buffalo Buffalo, NY	Analysis underway
Samah Hayek	Post-doctoral Fellowship	Fellow St. Jude Children's Research Hospital Memphis, TN	Manuscript Submitted
Bryan Dieffenbach	Fellowship Training	Fellow Brigham and Women's Hospital Boston, MA	Analysis underway
Suman Shrestha	Graduate Training	Student UT Health Graduate School Houston, TX	Analysis underway
Monica E. Reyes	Post-doctoral Fellowship	Global Health Officer US Department of HHS El Paso, TX	Analysis underway
Rozalyn Rodwin	Fellowship Training	Fellow Yale University New Haven, CT	Analysis underway
Taumoha Ghosh	Fellowship Training	Fellow University of Minnesota Minneapolis, MN	Analysis underway



# The Childhood Cancer Survivor Study



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  - Biospecimen Tables
  - Subsequent Malignant Neoplasms
- Public Access Data
  - Overall CCSS Cohort Demographic and Treatment Exposure Tables
  - Public Access Data Tables
- Published Research
  - Publications
  - Reviews
  - Abstracts
  - Supplemental Information
- Tools & Documents
  - CCSS Questionnaires
    - Baseline and Follow-Up Questionnaires
    - Ancillary Study Questionnaires
  - Survey Question Set Matrix
  - Progress Reports
  - Investigator Meeting Materials
  - Calculators & Other Tools
    - CCSS Cardiovascular Risk Calculator
  - Participant Newsletters
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# LTFU

Long-Term Follow-Up Study

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## **Appendix**

### **Sample LTFU Participant Newsletters**



**LTFU**

Long-Term Follow-Up Study

Summer 2019

# Update

## More knowledge, more power

Little was known about what it meant to be a survivor of childhood cancer when the LTFU Study began in 1994. You've helped change that.

To continue learning how to protect survivors' health during the decades after treatment, we will launch the next follow-up survey in August 2019.

**Convenient** The survey will roll out first to participants for whom we have email addresses. (Paper surveys will be mailed later.) By saving the survey icon onto a smart phone or other device, you can simply tap your home screen to start or continue answering questions.

**Update or provide your email address** for easy access to the new survey. Visit [ltfu.stjude.org](http://ltfu.stjude.org) and click on "Update Your Info."

**Comprehensive** This survey collects a detailed update of information about your health. It's important for us to know if things have changed, and just as important to know if they stayed the same! Your responses become even more important with each additional year of follow-up.

**Let's keep learning, together!**

## 2017/2018 survey preferences

Each LTFU Study participant is unique—and each survey makes a unique contribution to advancing scientific knowledge. To make it as easy as possible for you to complete follow-up surveys, we offer a variety of formats. This graph shows how many participants used each of the formats for the recently completed survey.

We will continue to enhance the survey completion options, based on your suggestions and feedback from the Participant Advisory Council (PAC) (see page 2).

NUMBER OF SURVEYS COMPLETED, BY FORMAT

5,850  
ONLINE/MOBILE

38%

2,527  
PHONE CALL

16%

6,924  
PAPER

46%

### A NOTE FROM US

The most recent LTFU Study follow-up survey has officially closed, and in just a few months, new knowledge about survivorship will be in the hands of doctors, survivors, and researchers. **Check out the infographic on page 2** that shows what we do with your data.

#### Every response matters

More than 74% of the study's survivor participants and 61% of their siblings completed the survey. Each of the 15,000 completed surveys contains valuable information. LTFU's detailed, continuously updated data is what makes it such a powerful research resource. Thanks to you, we know more than ever before about how to promote survivors' health.

#### New survey is launching!

The LTFU Study research team is working hard to finalize the next follow-up survey, which will launch in August 2019. This survey is important because it will comprehensively update participants' health information. Strong response rates increase the accuracy and usefulness of research results. **Read "More knowledge, more power" to learn more.**

#### Thank you!

On behalf of the LTFU Study team, I want to thank every LTFU participant for your ongoing dedication to advancing knowledge about survivor health.

Greg Armstrong, MD  
Principal investigator



## We're glad you asked...

### What happens to my survey after I return it?

You mailed back your paper survey, completed your telephone interview, or hit "Submit" if you responded online/mobile. What then?

If you're curious about what we do with your data, here's a look behind the scenes.



#### TRACK

As soon as your completed survey is received at the LTFU Coordinating Center at St. Jude Children's Research Hospital in Memphis, TN, we log it into our tracking database—and we stop sending you reminders!



#### STORE

Information from online/mobile surveys and telephone interviews is directly stored in our database. Paper surveys are scanned to translate the filled-in "bubble" answers into digital code; handwritten responses are transcribed and coded. Then the paper surveys are stored in locked cabinets in a secure facility at the Coordinating Center.



#### MERGE

When we close the survey, all of the data are combined to create a single data set. Each survey collection period lasts about two years. Completing your survey soon after receiving it can help shorten the survey collection period.

#### RELEASE

As soon as the results are released, you start making a difference. LTFU data are:

- **Shared with physicians** around the world through scientific publications and conference presentations, to enhance their knowledge about how to provide the best medical care to survivors.
- **Used by researchers** launching new studies to learn more about a specific issue, or to investigate ways of improving survivor health.
- **Communicated to survivors** so they have the knowledge they need to prevent or manage late effects. Information is published in the LTFU newsletter, on our website ([ltfu.stjude.org](http://ltfu.stjude.org)), and in HealthLinks published by the Children's Oncology Group ([childrensoncologygroup.org](http://childrensoncologygroup.org)).



#### CLEAN

The entire data set is carefully reviewed by statisticians at the LTFU Statistical Center at Fred Hutchinson Cancer Research Center in Seattle, WA to make sure it is complete and accurate. This takes about three months. Then the data are ready to be used.



### Update or provide your preferred email address

To be notified of the next survey via email, please take a minute to confirm your contact information.

- Visit [ltfu.stjude.org](http://ltfu.stjude.org) and click on "Update Your Info"
- Call us toll-free at 800-775-2167
- Email us at [LTFU@stjude.org](mailto:LTFU@stjude.org)

## LTFU PAC update

More than 100 participants volunteered for the LTFU Participant Advisory Council (PAC) after reading about it in the last newsletter (Winter 2019, online at [ltfu.stjude.org](http://ltfu.stjude.org)).

PAC members are already helping to shape the study by sharing their suggestions on how to improve communication about the LTFU follow-up surveys. We are grateful for their insights!

Study participants who are willing to share their ideas and opinions can still join the LTFU PAC. We will reach out on an as-needed basis to people who signed up. There's no time commitment. To volunteer, please email your interest to [ltfu@stjude.org](mailto:ltfu@stjude.org).

# Skin cancer early detection practices among survivors

Skin cancer is the most common second cancer among childhood cancer survivors treated with radiation, and one of the most treatable if detected early. But many survivors are missing an important opportunity to protect their health, LTFU Study research found.

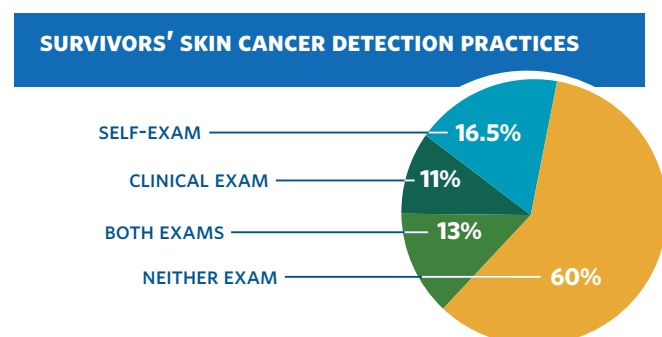
## A unique opportunity

Skin cancer is the easiest cancer to detect early because it's the only cancer we can actually see. Current follow-up guidelines recommend that survivors treated with radiation regularly check their skin for changes, and receive a skin exam by their health care provider during their annual check-up. Early detection and treatment can help survivors live longer, healthier lives.

LTFU researchers recently published data from 728 participants in the ASK (Advancing Survivors' Knowledge) About Skin Cancer Study, which assessed survivors' adherence to skin cancer screening guidelines.

## What we learned

When asked how many times in the past two months they had carefully checked their skin, and whether, in the past 12 months, a health care provider had examined their whole body, here's how they responded:



## What you can do

**Ask your health care provider for a whole-body skin examination:** Providers are more likely to screen when requested to do so by their patients.

**Learn how to examine your skin:** Learn how to do a monthly skin self-examination to detect any



ADVANCING SURVIVORS' KNOWLEDGE

changes using the ABCDE (Asymmetry, Border, Color, Diameter, Evolution) rule. More information about how to check your skin is provided by the Centers for Disease Control: [www.cdc.gov/cancer/skin/basic\\_info/symptoms.htm](http://www.cdc.gov/cancer/skin/basic_info/symptoms.htm)

**Practice sun safety:** Stay in the shade, wear protective clothing outdoors, and apply water-resistant sunscreen (a minimum of 30 SPF) every two hours even when it's cloudy. Avoid tanning beds!



Citation: Geller A, Keske R, et. al. Skin cancer early detection practices among adult survivors of childhood cancer treated with radiation. *Journal of Investigative Dermatology*, April 2019

## Latest LTFU publications

Here's a sampling of more LTFU Study research published since the beginning of 2019.

**Journal of Investigative Dermatology**, April 2019  
*Genome-wide association study in irradiated childhood cancer survivors identifies HTR2A for subsequent basal cell carcinoma.*

**Psycho-Oncology**, April 2019  
*Sleep, emotional distress, and physical health in survivors of childhood cancer.*

**Journal of Clinical Oncology**, March 2019  
*Therapy-related cardiac risk in childhood cancer survivors.*

**International Journal of Radiation Oncology**, February 2019  
*Hyperthyroidism following radiation therapy for childhood cancer: a report from the Childhood Cancer Survivor Study.*

**A complete list of all published research can be browsed on the LTFU website:** [ltfu.stjude.org](http://ltfu.stjude.org)

**A NOTE FROM US**

Three recent “first of their kind” investigations from the LTFU Study have significantly advanced what is known about how exercise affects adult survivors of childhood cancer. These findings demonstrate the positive effects of exercise on survivors’ physical and mental health.

We are excited to share them with you, and in this issue the researchers themselves discuss what they discovered and its implications for survivor health. We have also compiled some useful tips for increasing or maintaining your level of physical activity.

**Reminder to complete your survey**

We finished mailing follow-up surveys in August 2018 and are now following up with participants who have not yet responded. Every survey is important! If you didn’t receive yours or need another copy, please let us know:

- Visit [ltfu.stjude.org](http://ltfu.stjude.org) and click on “Update Your Info”
- Call us toll-free at 800-775-2167
- Email us at [LTFU@stjude.org](mailto:LTFU@stjude.org)

Visit [ltfu.stjude.com](http://ltfu.stjude.com) to keep up with new study results as they are published, or to browse a complete list of more than 300 papers we’ve published since the study began.

None of these advances could take place without your dedication to providing detailed data in survey after survey.

Thank you from all of us on the LTFU Study research team.

Greg Armstrong, MD  
Principal Investigator



# Exercise and survivorship: How it helps your health

This issue highlights results from three recent studies focusing on the role of exercise in survivor health.

We also provide some tips on how to incorporate exercise into your daily routine. We are pleased to be able to “give back” to you this important new information. We hope you find it useful and encourage you to share it with your health care team. You should always check with your physician before beginning or increasing your activity program.

## Exercise helps survivors live longer

**By Jessica Scott, PhD**

This study provides important evidence that a relatively small increase in weekly exercise can make a big difference in survivors’ lives.

Analyzing data reported by more than 15,000 LTFU participants, we found a 42% reduction in mortality among survivors who were getting about 40 minutes of vigorous exercise each week compared to those who rarely or never exercised. “Vigorous” exercise is activity that makes you breathe hard, like brisk walking, dancing, or playing basketball or tennis.

### From outer space to survivorship

My previous research took place at the NASA Johnson Space Center. Astronauts are like cancer patients—they develop side effects from being in space for long periods of time. We found that exercise was important in preventing and reversing a lot of the side (continued on pg 2)



Jessica Scott, PhD (Memorial Sloan Kettering Cancer Center), is the lead author of “Association of exercise with late mortality in adult survivors of childhood cancer” (JAMA Oncology)



## Exercise helps survivors (continued from pg 1)

effects related to spaceflight. I wanted to apply what we learned from astronauts to cancer patients.

### Next: Determining the dose

Exercise can be powerful medicine. This study focused on vigorous exercise, but we know from studies of the general population that even moderate levels of exercise have substantial benefits. Moving forward, we hope to identify the specific “dose” of lower levels of exercise required to provide benefits.



Emily Tonorezos, MD (Memorial Sloan Kettering Cancer Center) is the lead author of “Impact of exercise on psychological burden in adult survivors of childhood cancer” (Journal of Clinical Oncology)

## Exercise improves long-term mental functioning

**By Emily Tonorezos, MD**

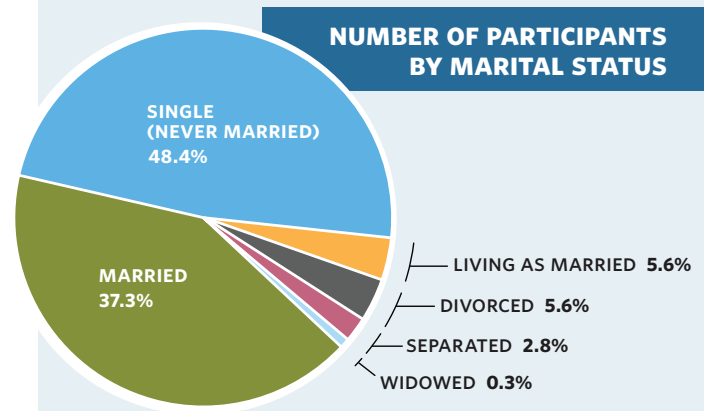
This is the first study to look at the long-term effects of exercise on survivors’ depression, anxiety, memory, and concentration. When we compared data from LTFU participants’ baseline surveys with what they reported seven or eight years later, we saw that the benefits of exercise on participants’ mental health continued for years. If you work out at age 33, you’ll feel brighter at age 40.

Around 10% of survivors whose data we examined were experiencing issues like depression and anxiety, and this was more common among people who weren’t exercising. Mood and mental processes like concentration, memory, and being organized were all improved among people who exercised vigorously (for example, walking briskly) for an hour a week.

### Getting and staying healthy

I have the privilege of taking care of adults who had childhood cancer. Most of them are looking for ways to stay out of doctors’ offices and would prefer not to be taking medicines. I want to find better ways to help them get healthy and stay healthy. Exercise is a very appealing approach.

## The LTFU Study community



The nearly 25,000 people from the US and Canada who participate in the LTFU Study have one important thing in common—each person was treated, as a child, for cancer. But within this community, each participant represents a unique combination of characteristics—age, sex, location, original diagnosis and treatment method, and hundreds of other factors. Each participant is uniquely important. Here is the most recent participant-reported data on marital status. Thank you to all of you for your dedication and ongoing contributions.

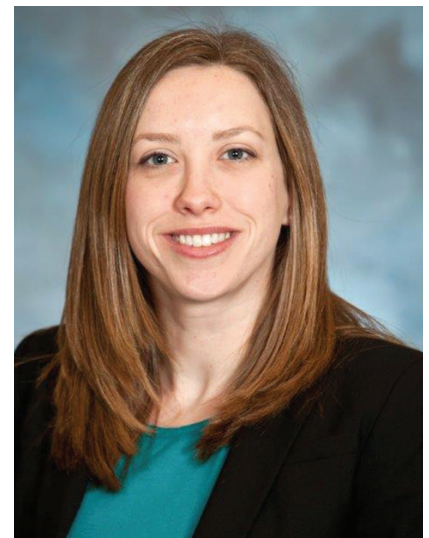
## Addressing inactivity in survivors

**By Katie Devine, PhD**

Physical activity is important for young people in general, and even more important for those who are cancer survivors, because of its positive effects on long-term physical and mental health. However, when we looked at LTFU participant data, we saw that 46% of adolescents and 41% of young adults were not achieving a healthy level of activity.

### My driving force

As a psychologist, I see how hard it can be for people to start exercising. Survivorship can (continued on pg 3)



Katie Devine, PhD (Rutgers Cancer Institute), is the lead author of “Factors associated with physical activity among adolescent and young adult survivors of early childhood cancer” (Psycho-Oncology)

# Let's get moving!

By Kiri Ness, PT, PhD

Physical activity can improve survivors' physical and mental health. I encourage my patients to add activity to their daily routines in easy, realistic ways. You don't need to make big changes!

## Tips to try

- Park a few spaces further away than you normally park.
- Instead of the elevator, take the stairs for one or more flights, then take the elevator the rest of the way.
- When you're sitting at home or at work, get up once in a while and walk around for 2-3 minutes. Set a timer to remind yourself it's time to move!
- Make an appointment with a friend or family member to go for an easy walk.
- Walk down the hall or march in place whenever a commercial comes on tv.

## Turn your screen into an exercise machine

Videos can provide "virtual exercise" right at home.

Explore what's available on YouTube, or search for some of my favorites:

- Five(ish) Minute Dance Lesson: African Dance (Kennedy Center Education Digital Learning)
- One-Mile Happy Walk (Walk at Home)
- The Best 15-Minute Beginner Workout—No Equipment Needed (POPSUGAR Fitness)
- 3-minute Daily Exercise—Easy Yoga (Tai Chi Health Products)
- Nature Walk videos



Kiri Ness, PT, PhD, is a physical therapist and researcher at St. Jude Children's Research Hospital and co-author of the three studies highlighted in this newsletter.

pose additional barriers. My sister is a long-term osteosarcoma survivor. I've witnessed how exercise has helped her; I've also seen her ups and downs and challenges.

I conducted this study because I wanted to understand how to help people who are struggling to thrive in their survivorship—how to help them make healthy changes. That's my driving force.

## Predicting risk, providing support

Analyzing data from the LTFU Study, we learned that many inactive adolescents:

- Had been treated with cranial radiation
- Reported a lot of "screen time" (tv and videos)
- Had health issues limiting their ability to be active
- Were girls and/or had parents without a college degree (this is similar to the general population)

We also learned that adolescents who had poor self-esteem or diets that were not healthy were less likely to get enough exercise later as young adults.

## How these findings help

Knowing this, we hope to address inactivity by being able to "predict" a young cancer survivor's risk for low activity, and help them choose and sustain healthier lifestyles.

Read a summary of the study in Latest Results at [ltfu.stjude.org](http://ltfu.stjude.org).

## Beating barriers

Inactivity is a problem for a majority of people in the US, and survivors have even more reason to pay attention because it can benefit them greatly. But they also may have unique concerns.

**Motivation** When I prescribe exercise for a patient I say, "You are worth it. You need to love yourself and remind yourself you are worth it." Everyone around you will benefit, too, because you'll be healthier and more productive.

**Fear** If you fear movement or lack confidence, an exercise professional can prescribe exercise that starts you at the right level. Some physical therapists and exercise physiologists specialize in working with cancer survivors.

**Limitations** If physical impairment interferes with your ability to exercise, a rehabilitation professional can provide guidance on how to incorporate exercise into your daily activities.

**Fatigue** The treatment for fatigue is exercise. A little activity will help reduce your fatigue.

Tip: Sign up for a survivorship walk/run and train for it.



Photo credit: Seth Dixon, St. Jude BMC



# AC Walton: Living life on his own terms

## A rare diagnosis

AC Deonte Walton was seven years old when he was diagnosed with Hodgkin lymphoma, a cancer that starts in lymph cells in the body's immune system. It is most common in adolescents and young adults, but it is extremely rare in children as young as AC was. As AC recalls, "I kept falling down outside, and I was short of breath—I was diagnosed after my mom took me to the hospital because I couldn't breathe."

## Growing up poor

AC grew up poor in Chicago, and his disease and treatment put a lot of strain on his family. "My mom and dad didn't have much," he says. "There were a lot of troubles in our life. It was a big family—my mom was pregnant with my third sister at the time I was sick. My brother was born when I was 10 years old and still on treatment. And both my parents had problems with drugs."

## A little boy's fight

AC's doctors found that the lymphoma had spread from his neck, where it was originally found, into his abdomen. He received intense chemotherapy and had to have his spleen removed, but he was fortunate not to be treated with radiation. Sadly, he does recall one positive thing about treatment: "At home it was a fight to know when we were going to eat. When I was



AC Walton and his wife, Shani

in the hospital, I sometimes ate better than at home. The treatments were hard on me, but I came out of it a stronger person. When you have to fight, it makes you stronger."

## Cancer-free

Things got easier for AC when he finally achieved remission at age 11. He's now 33 years old, and the lymphoma has not returned. "It took my body a while to recover, but now I feel good, I feel fine," he says. Hodgkin lymphoma survivors may be at risk of developing chronic health problems later in life because of the treatment they received. [\(continued on back\)](#)

## Sam Watson and The Samfund: #cancerisntfree

The Samfund is one of the largest nonprofit organizations in the U.S. dedicated to offering financial assistance to young adult cancer survivors (ages 21-39) who are struggling financially because of cancer. The organization provides small grants to bridge income gaps and cover survivors' immediate financial needs. It also provides online tools to help survivors develop the skills to advocate for themselves and take control of their financial lives after cancer.

## Two-time survivor finds "her people"

Samantha Eisenstein Watson is the founder of The Samfund. Sam is a two-time young adult cancer survivor. She was diagnosed with Ewing sarcoma in 1999, in the

middle of her senior year at Brandeis University. In 2001, she was diagnosed with secondary myelodysplastic syndrome and received a bone marrow transplant. Sam, who is originally from New York, was treated at Memorial Sloan Kettering Cancer Center in New York City.

Sam says, "The Samfund got started almost by accident. After my bone marrow transplant, I was looking for a way to make a contribution. In 2003, I attended a conference in Boston for adolescent and young adult (AYA) cancer survivors. At that conference I felt that I had found 'my people,' and I realized I wanted to do something meaningful to support young adult survivors after treatment. I couldn't find any resources that offered financial help to survivors, [\(continued on back\)](#)



## Life on his own terms (continued from front)

But, AC says, “I haven’t had any permanent side effects—except that I found out I couldn’t have kids.”

### Living on his own terms

Today, AC and his wife, Shani, live just outside Chicago in Riverside, Illinois. They recently found out that, with the help of assisted reproduction techniques, Shani is pregnant with their first child. AC, who has worked in fire and flood restoration since he was 20 years old, currently does carpet cleaning, a job he loves.

In spite of the hardships his family faced, AC has strong family relationships today. “I had to go through a lot basically by myself. Being so poor broke up the family, but we survived, and now Shani and I see my parents all the time. We live just 20 minutes away, and everyone gets along just fine.”

To stay on top of his health, AC is seen once a year at the childhood cancer survivors’ clinic at Advocate Children’s Hospital in Chicago. He’s lucky to have a dedicated survivorship clinic nearby and smart to take advantage of it. AC realizes that participating in survivorship care can help him accomplish his simple goal for the future: “My goal is just to live a life with my family the way I want to live it,” he says, “and not worry about cancer.”

## Sam Watson and The Samfund (continued from front)

so I decided to start my own! At 25 years old, I had no idea what I was getting into, but I knew I had great people around me to help.”

### From groceries and rent to starting a family

The grants currently provided by The Samfund average between \$1,500 and \$2,000. They are most often used for everyday living expenses such as rent or mortgage payments, groceries, health insurance, or car insurance. The fund also offers slightly larger grants to survivors who want to start families, to help cover the costs of adoption or assisted reproduction. Cancer survivors who are between the ages of 21 and 39 at the time of application are eligible to apply for a Samfund grant. (Full eligibility requirements are available on the group’s website at: [www.thesamfund.org/get-help/grants/](http://www.thesamfund.org/get-help/grants/))

Sam notes that, “In addition to helping with finances, a big part of our mission is to validate the struggles that young adults face and help them feel more empowered to advocate for themselves. One of the most important things you can do as a survivor is to speak up and ask for help when you need it. I was lucky to learn this from my mom, who was an oncology nurse at Sloan Kettering.”

But asking for help can be especially hard when it comes to finances. “There is a lot of shame around financial stress,” Sam observes. “But if you’re struggling financially because of cancer, it doesn’t mean you did anything wrong. We hear from so many survivors that the validation they feel from receiving a Samfund grant goes even further than the money.”

### Celebrating 15 years

The Samfund recently celebrated its fifteenth anniversary. Since 2005, the fund has distributed over \$1.9 million in grant funding to young adult cancer survivors. Individual small donors provide 80-90 percent of the grant funds. And, remarkably, almost a quarter of the grant recipients go on to become

donors themselves—“paying it forward” in the spirit of Sam herself.

To learn more about The Samfund, to donate, or to apply for a grant, visit their website:

[www.thesamfund.org](http://www.thesamfund.org).

The website offers an informative online video as well as slides to walk survivors (and their family members or social workers) through the application process.



Samantha Eisenstein Watson, founder of The Samfund